

RESEARCH ARTICLE

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The Evaluation of the News Related to Coronavirus in National Media before and after the First Declared Case in Turkey

ABSTRACT

Objective: We aimed to investigate the content of Covid-19 news in the media before and after the declaration of the first Covid-19 case in Turkey, as well as the compatibility of their medical messages with World Health Organisation (WHO) data.

Methods: In this descriptive cross-sectional study, Covid-19 news in Turkey's most visited webpages of five newspapers and five internet news sites was examined retrospectively for two months categorized as the periods of one month before and one month after the first Covid-19 case declaration in Turkey. The news was evaluated according to their content, sources, content and headline compatibility, evidence and accuracy levels in terms of WHO reports, its potential to evoke social negative emotions such as anxiety, fear, panic, and to produce negative bias against China. Statistical analysis was performed by using the SPSS 21 program and the results were expressed as numbers and percentages.

Results: It was determined that in total of 7915 news, the most content was about the protection and prevention methods. In the news before and after the first case declaration in Turkey, the content-headline incompatibility rates were 50,8% and 1,1%; incompatibility rates of the medical information in the news with WHO reports were 7,1% and 2,9%; the rates of referencing were 74,3% and 66,9%, the rates of the news having the potential to produce anxiety and fear in the reader were 56,9% and 19,6% and to produce prejudice and negative attitudes towards China were 19,7% and 4,6%, respectively.

Conclusions: It seems that the declaration of the first Covid-19 case changed the news making pattern of the media to a more responsible behaviour for the public. We suggest that it is a rational approach to use the power of the media correctly in enhancing public awareness towards Covid-19 pandemic.

Keywords: Covid-19, Media, Analysis

Türkiye’de Görülen İlk Koronavirüs Vakasından Önce ve Sonra Ulusal Medyada Yer Alan Koronavirüs Haberlerinin Değerlendirilmesi

ÖZET

Amaç: Bu çalışmada ülkemizdeki ilk vakanın görülmesinden önce ve sonra medyadaki Covid-19 haberlerinin içerikleri ile topluma verdikleri tıbbi mesajların DSÖ verileriyle uyumunu araştırmak amaçlanmıştır.

Gereç ve Yöntem: Kesitsel tipte tanımlayıcı olarak tasarlanan bu çalışma için Türkiye’de ilk Covid-19 vakasının görüldüğü tarihten önceki ve sonraki birer aylık toplam iki aylık zamanda en çok ziyaret edilen beş gazetenin web sayfası ile beş haber sitesindeki Covid-19 haberleri geriye dönük olarak incelenmiştir. Haberler, içeriklerine, kaynaklarına, haber ile başlık uyumuna, DSÖ verilerine göre kanıt ve doğruluk düzeylerine, sosyal kaygı, korku, panik gibi negatif duygular ve Çin’e karşı ön yargı oluşturma potansiyellerine göre değerlendirilmiştir. Verilerin tanımlayıcı istatistikleri, SPSS 21 programı kullanılarak sayı ve yüzde şeklinde ifade edilmiştir.

Bulgular: İncelenen toplam 7915 haberin en fazla hastalıktan korunma ve önleme yollarına ait içeriğe sahip olduğu tespit edilmiştir. Türkiye’de ilk Covid-19 hastasının tespit edilmesinin öncesindeki ve sonrasındaki haberlerde başlık ile içeriklerinin uyumsuzluk oranlarının %50,8 ve %1,1; içerdikleri tıbbi bilginin DSÖ kaynaklarıyla uyumsuzluk oranlarının %7,1 ve %2,9; kaynak belirtme oranlarının %74,3 ve %66,9 olduğu tespit edilmiştir. İlk vakanın görülmesinden önceki haberlerin %56,9’unun, sonraki haberlerin %19,6’sının okuyucuda kaygı ve korku hisleri oluşturabilecek özellikte olduğu; ilk vakadan önceki haberlerin %19,7’sinin; sonraki haberlerin ise %4,6’sının Çin’e karşı önyargı ve negatif tutumlara neden olabilecek türde haberler olduğu belirlenmiştir.

Sonuç: Covid-19 vakasının ilk kez görülmesinden sonra medyanın yaklaşımını değiştirip daha sorumlu haberler yapmaya başladığı görüldü. Covid-19 salgınında halkın bilinçlendirilmesinde medyanın gücünü doğru kullanmanın akılcı bir yaklaşım olduğunu düşünüyoruz.

Anahtar Kelimeler: Covid-19, Medya, Analiz

INTRODUCTION

News about the new type of coronavirus pandemic that emerged in Wuhan, China and later called Covid-19 has recently taken a large place in the media. Although the news increases the awareness of the public about the coronavirus, it can also cause pollution of information due to various concerns of media outlets. Incorrect or incomplete contents of the news due to rating concerns can also lead to a negative orientation of the society in the field of health. People can develop false behavior patterns due to this misinformation. In this context, difficulties can be experienced by healthcare providers during the implementation of evidence-based and scientific applications and it may be limited or impractical to make correct medical interventions (1). The term 'infodemic' which was first used in the SARS epidemic, has a meaning of 'the rapid spread of both true and false information about a subject to large masses. This term was used again by the World Health Organization (WHO) in the Covid-19 outbreak. In Covid-19, a lot of unfounded and fearful information has reached wide masses through the media (2). There have been negative consequences of unfounded news such as prevention methods resulting in death, trial of various treatment methods that have no effect. In Covid-19 disease, scientists have limited knowledge about the prevention, treatment and many other aspects due to being a newly encountered microorganism (3,4). The pandemic started in China and spread rapidly all around the World. Negative attitudes towards the Chinese government were experienced in all countries of the World. This situation has caused a racism and discrimination towards Chinese people living in many countries of the World (5).

Investigating the content of the news about coronavirus in the written or visual media can allow to determine the information reached the society and the awareness they have about coronavirus. Studies in this area have been focused in examining the types of coronavirus-related news published in certain date intervals addressing the coronavirus or the information about the coronavirus they convey to the public. The scientific relevance of the news was not evaluated in these studies.

The purpose of this study is to evaluate the accuracy and reliability of the health information conveyed by the news to the reader by examining the contents and sources of coronavirus-related news published in national newspapers and news sites with high circulation in Turkey.

MATERIAL AND METHODS

In this descriptive cross-sectional study, the news related to coronavirus was retrospectively analyzed in the web pages of the five most visited newspapers and five news sites between the dates of 11.02.2020-11.03.2020 and 12.03.2020-12.04.2020 which are the periods of one month

before and one month after the first coronavirus case declaration in Turkey on March 11, 2020, respectively. The most visited newspapers and news sites in the internet environment were selected by searching the sub-headings of "Newspapers" and "News" under the "Turkish Press and Publication" category on www.alexacom. Accordingly, the top five most visited newspapers were Hürriyet, Milliyet, Sözcü, Akşam and Yeniakit; and the top five news websites were www.ensonhaber.com, www.haberturk.com, www.haberler.com, www.haber7.com and www.superhaber.tv. Using the "Google Advanced Search" option in webpages of selected newspapers and news sites, 3859 news items that include the words "coronavirus" and "COVID-19" between 11.02.2020 - 11.03.2020 before the first case was declared and 4056 news between 12.03.2020 - 12.04.2020 after the first case was declared were reviewed. Thus, a total of 7915 news was assessed.

Independent variables in the news before the announcement of the first Covid-19 case in Turkey were determined as 'the type of the news', 'whether the news creates negative situations such as anxiety, fear, panic', 'whether the news constitutes negative bias against China', 'whether the news containing medical information is compatible with WHO sources' 'whether the information given is referenced', 'the origin of the source of the news', 'whether the headline is compatible with the content of the news'. In addition to these variables; 'news prepared by the Ministry of Health for the purpose of informing the public', 'whether the news consists of measures taken throughout the country', 'whether the news emphasizes social solidarity', 'news about penalties that are imposed on people who do not comply with the restrictions', 'news about violence against healthcare workers', 'news with positive criticism towards the health system' were considered as independent variables in the news after the announcement of the first Covid-19 case in Turkey.

The news was analyzed by the researchers simultaneously with the video conference meetings. The decision of the absolute majority has been decisive in the categorization of the news content in order to minimize the personal differences. The data obtained were evaluated using the SPSS 21 (Statistical Package for the Social Sciences) program. Descriptive statistics were given as number (n) and percentage (%).

RESULTS

The Distribution of the News Content:

There were 11.254 pieces of content in total of all news. In the news both before and after the the declaration of the first case in Turkey, it was seen that the content was mostly about the measures to be taken against the disease and the ways of protection (1837 (32.9%), 1868 (33.1%),

respectively). The least content in the news before the first case declaration was about the clinical information for the disease (478 (8.6%)); while it

was about the economic effects of the disease (394 (6.9%)) in the news after the first case declaration (Table 1).

Table 1. The distribution of coronavirus news by content

Content of the news	Before the first case		After the first case	
	Number (n)	Percentage (%)	Number (n)	Percentage (%)
Advice on the prevention and protection	1837	32.9	1868	33.1
Epidemiological data	1670	29.9	1633	28.8
Magazine	968	17.2	1135	20.1
Economic effects of the disease	638	11.4	394	6.9
Information on the clinic of the disease	478	8.6	633	11.1
Total number of the contents	5591	100	5663	100

The Compatibility of the Titles with the Contents of the Corovirus-related News: It was determined that in 1961 (50.8%) of the 3859 news before the first case declaration, the title and the news content were completely incompatible. The number of news having titles completely compatible with the content was 212 (5.5%),

mostly compatible was 82 (2.1%) and mostly incompatible was 1604 (41.6%). It was seen that, of the 4056 news articles examined after the first case declaration, 43 (1.1%) were completely incompatible, 904 (22.3%) were completely compatible, 2466 (60.7%) were mostly compatible, 643 (15.9%) were mostly incompatible (Table 2).

Table 2. The compatibility of the titles with the contents of the coronavirus-related news

The compatibility of the news title with the content	Before the first case		After the first case	
	Number (n)	Percentage (%)	Number (n)	Percentage (%)
Completely compatible	212	5.5	904	22.3
Mostly compatible	82	2.1	2466	60.7
Mostly incompatible	1604	41.6	643	15.9
Completely incompatible	1961	50.8	43	1.1
Total	3859	100	4056	100

Compliance of medical information in the news with WHO Sources: There were 1733 (21.9%) news containing medical information among the 7915 news. It was observed that the medical information given in 312 (27.1%) of the 1150 news articles published in the period before the first case declaration in Turkey, was completely compatible with WHO sources, while 626 (54.4%) was mostly compatible, 82 (7.1%) was completely incompatible with WHO sources, and 130 (11.4%) was mostly incompatible.

The medical information given in 150 (25.7%) of the 583 medical news published in the period after the first case declaration in Turkey, was completely compatible with WHO sources, 355 (60.9) was mostly incompatible, 61 (10.5%) was mostly incompatible, 17 (2.9%) was completely incompatible. It was observed that the number of the news containing completely incompatible medical information with WHO sources was decreased to 17 (2.9%) after the declaration of the first Covid-19 case in Turkey (Table 3).

Table 3. Compliance of medical information in the news with WHO Sources

Compatibility of Medical Content with WHO Resources	Before the first case		After the first case	
	Number (n)	Percentage (%)	Number (n)	Percentage (%)
Completely compatible	312	27.1	150	25.7
Mostly compatible	626	54.4	355	60.9
Mostly incompatible	130	11.4	61	10.5
Completely incompatible	82	7.1	17	2.9
Total	1150	100	583	100

Referencing Status of the News: Regardless of the content of the news, 1579 (40.9%) of the news referenced in the news examined before the first case declaration. Eight hundred and fifty five (74.3%) of the news containing medical information before the first declared case in Turkey; and 390 of (66.9%) of the news containing medical information after the first

case declaration, presented references for the medical information in their context. It was determined that no source was specified in 295 (25.7%) of the news before the first case declaration; and in 193 (33.1%) of the news after the first case declaration. In 192 of these news (12.2%), both Chinese and non-Chinese sources were given as references. Besides; it has been

determined that 1161 (73.5%) news reports used non-Chinese sources and 226 (14.3%) news reports used Chinese-based sources.

In the news examined after the first case declaration, it was observed that the number of the

news referring to the source decreased to 1153 (28.4%). Among them, 14 (1.2%) were both from China and outside of China, 1087 (94.3%) were from outside of China, and 52 (4.5%) were from China (Table 4).

Table 4. Referencing status of the news

	Before the first case		After the first case	
	Number (n)	Percentage (%)	Number (n)	Percentage (%)
Source of the medical news				
Source Available	855	74.3	390	66.9
No Source	295	25.7	193	33.1
Total	1150	100	583	100
Origin of the source in all cited news				
Chinese sources	226	14.3	52	4.5
Chinese and non-Chinese sources	192	12.2	14	1.2
Non-Chinese sources	1161	73.5	1087	94.3
Total	1579	100	1153	100

News with A Potential to Evoke Negative Thoughts and Prejudice: According to the evaluations made by the researchers in our study; 2196 (56.9%) of the news before the first case declaration; 796 (19.6%) of the news after the first case declaration had content that could create negative thoughts such as fear, anxiety and panic in the readers. It was evaluated that 760 (19.7%) of the news before the first case declaration and 186 (4.6%) of the news after the first case declaration had content that could create prejudice against the citizens of Public Republic of China, the place where the pandemic started.

Some Features of the News After the Declaration of the First Case in Turkey: 379 (9.3%) of the news after the declaration of the first case, consisted of daily developments shared by the Minister of Health in order to inform citizens. 1594 (39.3%) of the news was related to the current measures taken by the government; 870 of them (21.4%) emphasized social solidarity; 179 of them (4.4%) mentioned the punishments as a result of not complying with the measures, 9 of them (0.02%) were about violence in health. It was determined that 232 of the news (5.7%) consisted of positive and appreciative news about health workers and the health system.

DISCUSSION

In this study, we evaluated the data obtained from newspapers and news publishing sites on the internet. We observed that the contents of the news published both before and after the declaration of the first Covid-19 case in Turkey, were about "prevention and protection", "epidemiological data" and "tabloid" in similar proportions, mostly about "prevention and protection". Media, which is an important source of information on health for people, usually targets to make news that will attract public attention rather than medical professional news (6). In a study investigating the role of the media in China, it was reported that in the early days of the pandemic, the contents of the

news were mostly about the preventative and control procedures, the process of medical treatment and the economic effects of the disease, the most content was about the preventative and control procedures (7). These results are completely in accordance with the results of our study. In a study investigating the search behaviors of people on the internet related to Covid-19 in Italy, it was determined that the most searched topics were face masks, disinfectants, Covid-19 symptoms, coronavirus vaccine (8). Since the media aims to cover the news that mostly attracts the attention of people, we suggest that the disease prevention aspects are mostly selected subjects for the news.

The title of a news item can be different from its content. Such situations may occur as a result of the media's desire to attract more readers' interest and increase the reading rates (7). In our study, when we evaluated the compatibility of the news titles with the contents; we observed that the rate of completely or mostly incompatible news titles before the first case declaration, was 92.4%, and this rate decreased to 17% after the first case declaration. We also observed that the rate of completely or mostly compatible titles with the contents which was 7.6% before the declaration of the first case, increased to 83% after the first case declaration. We suggest that these alterations in the rates are due to the fact that the Covid-19 disease was perceived as a more serious situation in our country after the first case was declared, and the enhanced awareness of the news creators prevented rating concerns and led them to make news with compatible titles and contents.

In this study, we assessed the compatibility of the contents of the news containing medical information with the medical announcements published by WHO in terms of the medical messages they give to the reader. We observed that the rate of the news completely compatible with WHO sources which was 27,1 before the declaration of the first case decreased to 25.7%

after the first case declaration, the rate of the mostly compatible news increased from 54.4% to 60.9%, and the rate of completely incompatible news decreased from 7.1% to 2.9%. We may suggest that WHO was considered as a reliable source by the media about a disease seen for the first time in the World. On the other hand, we observed that no source was given to the reader in the news containing medical information (25.7% before the first case declaration and 33.1% after the first case declaration). In a study evaluating the medical messages of cancer news in the media in terms of evidence-based medicine, it was determined that 36.5% of the news, similar to our study, consisted of news that did not indicate the source (9). Although making news that would attract the attention of people is a reporting method, the accuracy of the news and especially the consistency of the information they contain with the scientific data is very important. It is also important to inform the public about a disease with a pandemic characteristic with the cooperation of health service providers and media, to serve the public with news that has scientific value and reliable source, in order to raise the awareness of the public and to help them to act correctly on this issue. In this context, it is essential for the journalists who make the news to receive opinions from experts in their field during the preparation of the news, and to convey up-to-date and correct messages to the public (9). The media has a great impact on alleviating the effects of a pandemic and reducing the speed of its spread (10). It is vital to reach people with medical information prepared from the right sources. In the Covid-19 pandemic, there were sad events that resulted in death due to misunderstanding from some of the news which led misuse of methanol for the purpose of coronavirus protection (3). As a result of some of the news with incorrect message content, many negative consequences such as refusing or delaying treatment, resorting to wrong protection from the disease were encountered (4).

When we evaluated all the news, we observed that 14.3% of the news with a mentioned source before the first case was of Chinese origin, while this rate decreased to 4.5% in the period after the first case declaration. Since the pandemic started in China and spread all over the world, most newsworthy events related to the disease were seen in China at the beginning of the pandemic. However, we suggest that this rate decreased due to the fact that the events in the news also originated from countries in the world other than China, as the cases spread to other countries of the world over time.

As a result of the evaluation of the researchers in our study, it was determined that the news content with a potential to cause negative emotions such as fear and anxiety in the readers was 56.9% before the first case declaration and

19.6% after the first case declaration. At this point, many countries of the world have encountered such situations and made efforts to overcome these problems. Combating the unfounded rumors and fear-inducing news about the coronavirus spreading all over the world has been an important public health problem (11). We consider that the decrease that we observed in this rate after the first case declaration may be due to the fact that the efforts have yielded results in our country, similar to the efforts to fight against unfounded news, especially led by WHO.

The fact that China is the source of the pandemic, has led to the formation of racism and prejudices associated with the pandemic all over the world. Especially fake news content resulted in the negative attitudes and behaviors to Chinese people living in many parts of the World (8). In Italy, a Chinese origin person was so affected by this situation that he tried to give a message to all people with a banner saying "I am not a virus, I am a human being." (12). In our study, we determined that the rates of the news that could create bias against China were 19.7% before the first case declaration and 4.6% after the first case declaration. We suggest that calling for an anti-racist approach in our country, as in the whole world, was effective in the lower rates observed after the first case declaration.

It is essential for the states to interact and communicate with the public through media in emergencies involving public health. In this regard, it is very important for the governments to lead a war like a pandemic (13). In addition to taking many measures in accordance with the health policies of the country since the first case was seen in our country, the people of the country were informed daily by the Minister of Health through the media. In this study, we observed that the rate of news with this feature was 9.3%.

It is very important for societies to act as a unit and in solidarity under the leadership of health authorities in public health problems that affect the whole country, in order to minimize the negative impact. We evaluated the news in this aspect and observed that the news after the first case declaration in our country, had a rate of 21.4%. The occupational group that has the highest priority in combating the pandemic is healthcare professionals. All healthcare workers who work more devotedly than ever to control the disease and treat patients in the best way, have been supported by many societies in our country (14). Similar to this situation, which is one of the results of social solidarity, the rate of news that appreciates healthcare professionals and their activities was found to be 5.7% of the news after the first case declaration. Violence against healthcare professionals is one of the main problems that are tried to be eliminated by health policies in many countries of the world. In the news after the first

case declaration, we observed that the rate of the news on violence against healthcare workers was 0.02%. We consider that this low rate is associated with the social solidarity and awareness that has developed in our country with the pandemic.

CONCLUSION

Health education gains great importance when encountering major problems such as the pandemic that concern the whole World. Using the media as a tool in health education is a rational approach. In the fight against Covid-19, people's high health literacy is one of the important ways to be least affected by the pandemic. The basic requirement of high health literacy is to have the right health information. Accordingly, the

publication frequency and content standards of Covid-19 news can be determined by making some legal arrangements for the internet media. In addition, efforts should be made to understand the importance of health journalism and to ensure that news creators have a high level of health literacy.

Experts and journalists must cooperate in making news that contain accurate and reliable information. Thus, both the awareness of the society on Covid-19 can be enhanced and the correct information can be provided. The Ministry of Health and public health organizations will convey the right messages to large masses through the media in the fight against the public health problem that concerns every segment of the society such as the pandemic.

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