

USE OF SOCIAL MEDIA USE IN HEALTH COMMUNICATION:
THE TWITTER USE OF THE TURKISH MINISTRY OF HEALTH
DURING THE PANDEMIC




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PLAGIARISM PAGE

I hereby declare that all information in this document has been obtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all material and results that are not original to this work.



08/07/2021

Buse Sibel Erdoğan

ÖZET

Sağlık iletişimi, yaşamın her anında hem bireysel hem de kurumsal düzeyde devamlı olarak kurulan bir iletişim türüdür. Sağlığa dair kurulan her türlü iletişimi kapsamak ile beraber; toplumda ve bireyde doğru sağlık davranış ve tutumlarını oluşturmak esastır. Bu çerçevede, sağlık kurumları ve sağlık otoriteleri hem günlük akışta hem de sağlık krizlerinde bireylere doğru sağlık bilgisini aktarma ve sağlık davranışlarının oluşturulmasına destekleme aşamasında sorumludur.

Bu çalışmada, Covid-19 pandemi krizinde Sağlık Bakanlığı'nın Twitter üzerinden yürüttüğü sağlık iletişimi süreçleri ve içerikleri analiz edilmiştir. Sağlık Bakanlığı Twitter üzerinden kurduğu sağlık iletişiminde pandemi konulu paylaşımların yoğunlukta olduğu ve hem pandemi ilişkili hem de pandemi dışı konularda bilinçlendirme 11 Mart 2020 ile 20 Kasım 2020 tarihleri arasında mesajları verilmiştir. Sağlık Bakanlığı sosyal medya hesabı Twitter üzerinden Yeniliklerin Yayılması Kuramına uygun bir iletişim türü kurmuştur ve pandemi döneminde sosyal medya üzerinden aktif bir iletişim kurmuştur.

Anahtar Kelimeler: Sağlık iletişimi, sosyal medya, kriz iletişimi, Covid-19

ABSTRACT

Health communication is constantly conducted on individual and corporate levels in all areas of life. While it encompasses all types of communications regarding health, its foundations lie in creating the right health behavior and attitude. Health authorities and institutions are responsible, in this sense, to relay information and appropriate behavior to individuals during times of crisis, as well as in daily life.

This study analyzes health communication processes Turkish Ministry of Health conducted on Twitter, and the content shared there, during Covid-19 pandemic. The Ministry of Health provided awareness raising messages in the health communication process it established on Twitter, where messages about the pandemic were frequent, in addition to other themes that are not directly related. Formed by the Ministry of Health between March 11th, 2020 and November 20th, 2020 via its social media account on Twitter, this type of communication is parallel with the theory, Diffusion of Innovations, ensuring active communication endeavors over social media during the time of the pandemic.

Keywords: Health communication, social media, crisis communications, Covid-19

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LIST OF ABBREVIATIONS

USA: United States of America

WHO: World Health Organization

HIV: Human Immunodeficiency Virus

ALS: Amyotrophic lateral sclerosis

ALSA: ALS Association

TSI: Turkish Statistical Institute

IWS: Internet World Stats

1. INTRODUCTION

Changes and developments in health communication abound today and can be observed with health communication endeavors, the numbers of which gradually increase. Health communication aims to improve public health and involves organizations' methods of increasing level of health knowledge, raising awareness and motivating (Avci, 2014, p.39). Communication studies focused on health also include stages of influence over individuals' general health and health decisions, in addition to the purpose of encouraging the correct health behavior for persons and the society (Tang et al., 2005, p.885).

Improvement of health conditions was a term posited by the World Health Organization for the first time in 1958 with a meeting held in Canada named "Health for Everyone in 2000". The organization described the notion of health improvement in this meeting as the increasing of accumulated knowledge of individuals regarding their health and being healthy with the right health behavior (Sözen, 2003, p.62).

Health communication is carried out over a number of media. While traditional media were preferred in the past, the technological advances of the day brought along new media selections for communication, one of which is social media. Social media provides the means for quickly learning health behavior on both individual and social levels (Vollum, 2014, p.561).

Various social media such as Facebook, YouTube and Twitter became important spaces to relay health information to the public; a condition that becomes more gradually more common every day. Active use of social media, as is the case

with many other fields, is now recognized by everyone. Social media are widely preferred for disseminating health information and delivering awareness raising messages to the public (Şener & Samur, 2013, p.513).

Crises are events that imprint negative effects on organizations and institutions, occurring quickly and are overcome lightly, if prior preparations are made (Bulduklu & Karaçor, 2017, p.283). Health crises, on the other hand, can be described as pandemics, unexpected accidents, failed medical interventions and earthquakes (Efstathiou, 2009, p.106).

Health crises are directly influential on individuals' states of health and therefore require a more challenging process management in comparison with others. Health crises can affect services, individuals, institutions and health personnel in various ways to the extent of causing life-threatening situations. That is also why preparations and taking actions rapidly are quite important in health crises (Bulduklu, 2015, p.207).

Conducting a transparent communication strategy for all stakeholders affected by the crisis is of utmost importance in the process of crisis management. Stakeholders need more communication and information during crises; from this perspective, fulfilling the needs of the public supports crisis management process. Avoiding unilateral communication in stages of informing public and transparently responding to incoming questions can prevent potential rumors and the growth of the crisis (Güreşçi, 2020, p.56).

Social media are preferred more and more every day as a communication channel to be used in crises and are actively used in health crises too. Social media supports rapid flow of information, prevents the potential deepening of crises thanks

to the means of bilateral communication and reaches a great number of people at the same time, which are some of the reasons as to why such media became significant (Bulduklu & Karaçor, 2017, p.280).

Social media are actively used in crisis management by government authorities and officials. Messages posted on social media with the purpose of raising awareness are supported with images and videos and the public is hence informed. Social media users can quickly access information or messages for awareness regarding the crisis and can even be personally included in this process thanks to features of social media such as likes, reposts and commenting (Sarı & Öztunç, 2020, p.804).

Covid-19 disease was first seen in the city of Wuhan in China in 2019 before it rapidly spread throughout the globe and became a global health crisis. During this process, many organizations and health authorities conducted health communication processes to overcome this global health crisis. To that end, social media channels have been actively deployed too.

This study examines health communication endeavors during Covid-19 pandemic as they were conducted on social media and analyzes the government authorities' messages disseminated via social media during this crisis.

2. CONCEPTUAL FRAMEWORK

2.1 Health Communication

2.1.1. The definition of health

The World Health Organization (WHO) defines health as “the state of physical, mental and social well-being, rather than the mere lack of disease or disability” (WHO, 1946, p.100). From a biomedical perspective, health refers to the functioning of any parts of the living body. Evaluated with regards to this definition, health only concerns the physical health of the person. Therefore, health is a medical topic (Weiss & Lonquist, 1994, p.110).

Naidoo and Wills (2009) consider the concept of health in three stages. The primary core of health has the smallest part of the society – the individual. The full well-being of individuals is expressed in a total of six different states: physical, spiritual, mental, emotional, sexual and social. The next stage includes the health of the society, which consists of individuals, and refers to the order in which individuals live in harmony. Shelter, nutrition, certain rules that govern social living and earning an income are considered within this stage. Provision of the optimal conditions required to protect social health, on the other hand, brings forth the concept of environmental health. The cleanliness of environment, water resources and clean air can be considered in this scope.

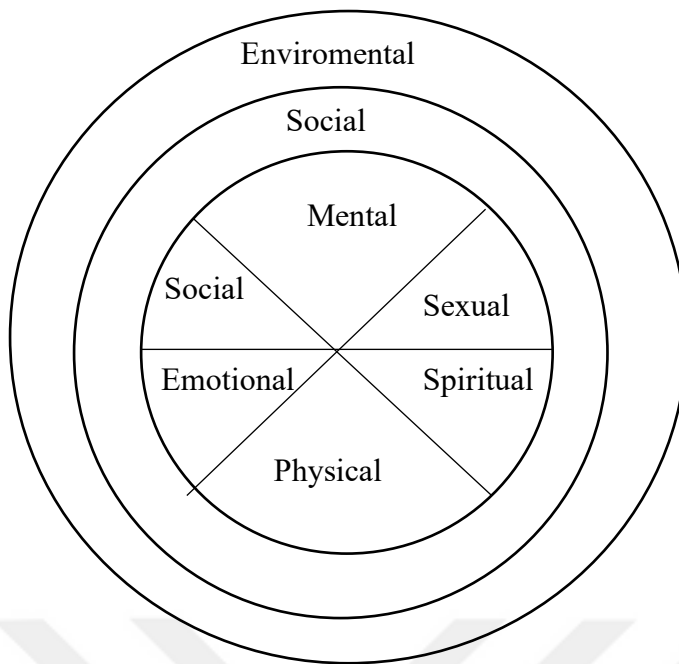


Figure 1. Dimensions of Health

(Naidoo & Wills, 2009, p.4)

The well-being of individual health dimensions influences social and environmental health as well. Taking the right measures with respect to health on an individual level would be of benefit to protect public health on a social level. From this perspective, health is a concept that can be socially improved and supported, along with individual development. Ultimately, development of the concept of health is nothing but static.

Bauer and Jenny also argue that the concept of health is a dynamic structure that allow support and improvement. The dynamic nature of health has been summarized below (in Okay, 2016, p.2; Bauer & Jenny, 2007, p.222):

- The concept of health does not only concern the bodily well-being, but also the social and spiritual state of the individual.

- Awareness in health aims for individuals to acquire the correct behavior and attitude in health. Thus, the individual can make the right decisions for their health and have the means to preserve it.
- The process of forming a health-conscious society, comprising of health-conscious individuals, does not only concern health professionals; political and social decision makers shall also be responsible in this process.
- Health is one of the most important factors that affect quality of life and plays an important role within the individual's relationship with their surroundings, their economic power and personal awareness.

The concept of health can be evaluated from different perspectives too. The psychological approach argues that individuals' attitudes and values interact with their behavior towards health issues and their reactions (Şahin, 1994, p.4). The individual's understanding of health may change according to their moods, ideas and beliefs. Since these concepts depend on the person, they can affect the individual perception of health as well.

The sociological approach, on the other hand, underlines the cultural and social aspects of the individual on the societal level (Lewis & Cuevas, 1996, p.23). Varying socially and culturally, a disease is observed as the spiritual and physical disorder of the person, lack of balance in social terms and lack of harmony. Consequently, the concept of health refers to the spiritual, mental, physical, emotional and social well-being of individuals and societies, and the integration of the environmental order with this state of well-being. From this perspective, each instance of the concept of health gives way to health communication. Before the concept of health communication is explained, the definition of communication will be covered.

2.1.2. The definition of communication

While the concept of communication has myriad definitions, it can be described as the means of individuals to express their needs and feelings and understand other individuals. The process of understanding one another between two individuals is based on making meanings. Communication helps individuals express themselves and understand others in all areas of life. Human beings utilize communication to understand each other (Üstün, 2005, p.88).

Certain elements are needed for communication to be carried out. They are shown in Figure 2. (Okay, 2012, p.10)

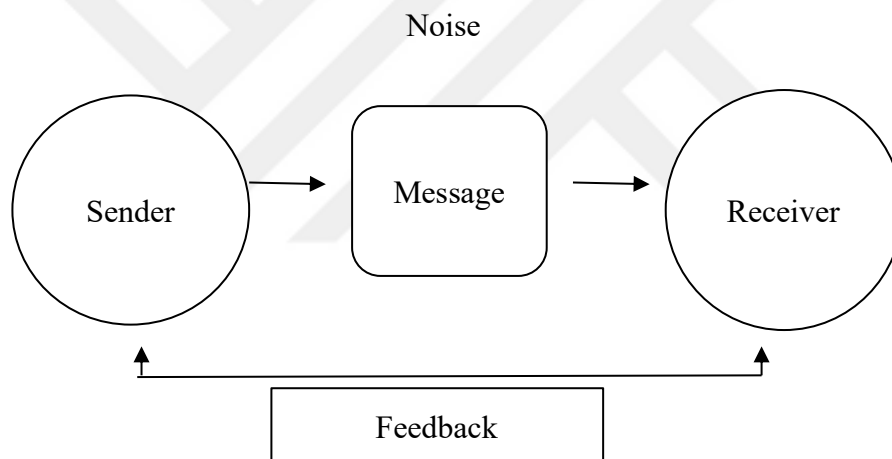


Figure 2. Elements of Communication

Illustrated above, the communication process is initiated by any sender, sending the message, by selecting a type of source. The sender or the receiver encode the message before sending it in order for the other party to receive and decode the message. Once the receiver makes sense of the message and encodes it again, communication occurs. A distortion in any of these stages hinder the communication (Tutar & Yılmaz, 2013, p.21).

Individuals constantly communicate with other individuals in their daily lives. However, individuals can also take part in the communication process on a wider level by listening, reading or watching, in addition to personal communications. Today, shares on social levels occur very frequently during the communication process. Having begun in the form of sending smoke, communication changed its outlook and adopted speech, writing and recently, electronic devices, still advancing (Usluata, 1995, p.5).

Individuals constantly communicate at every moment since they are born until they die and said communication has many themes and aims. Health communication is also a part of individuals' lifelong communication. Therefore, the next section will approach the concept of health communication.

2.1.3. The definition of health communication

Health communication, as a branch of communication, involves all types of communication concerning health. It represents a multifaceted field, which aims to reach quite a large population in order to relay all kinds of data concerning health, inform individuals and raise the level of social health with the purpose of influencing the individual, the population, health employees and health administrators (Schiavo, 2007, p.7). Health communication is a derivative of communication that is carried out by individuals with knowledge in the field and societies with certain target audiences at its core (Okay, 2016, p.11). The concept of health communication has been defined in a number of ways over the years and from differing perspectives. It can also be defined as the process of acquiring information that cover topics concerning health and ensuring that awareness is raised among persons (Castello, 1977). Another definition, on the other hand, points to the process, encompassing the methods regarding the level, function and implementation of communication processes

(Cassata, 1980). All types of communication, based on the requirements in the field of health and including health, are defined as health communication (Kreps & Thornton, 1984). Moreover, a definition in 1988 expresses that it is a motivational type of communication that aims to generate attitudes for individuals to lead healthy lives and to prevent diseases (Reardon, 1988). Later, in 1990, health communication is suggested by Donahew and Ray as the receipt and interpretation of messages by receivers (in Çınarlı, 2008, p.41-46; Sezgin, 2011, pp.95-96; Okay, 2007, pp.21-34). Health communication usually covers the communicative activities that are carried out to form a society with health individuals. Thus, health communication contains approaches concerning the health of individuals and their preservation thereof. Myriad branches of study work in collaboration to actualize this approach. In this scope, health communication also includes psychology, social psychology, sociology, medicine and health sciences (Yakut, 2008, pp.31-32).

Thomas (2006, p.3) and Kreps (2003, p.355) approach health communication from different perspectives. According to Thomas, there are individual, social network, organization, community and society, explained as below:

- The individual: The individual is at the center of the health communication process for the individual's attitude directly influences their state of health. All communication endeavors to that end can affect the individual's awareness, knowledge and behavior. Consequent to the communications, change on the individual's health is planned.
- The social network: The social environment in which the individual exists is also an important factor on health-related decisions. Accordingly, the purpose of endeavors

for health is grounded on helping individuals in a social network achieve the right content in order to make the right decisions for their health.

- The organization/institution: Organizations, institutions, non-governmental organizations, work environments and schools are primary level health service providers with certain rules. Awareness can be raised with respect to health within such organizations and adaptation to change in health behavior can be supported.
- The community: Health communication on this level can imbue individuals within the community with planning and targets that may influence their health, acting as a guide. Schools, workplaces, local groups and the government are examples for this type.
- The society: The society, in which the individual exists, is largely influential on the individual's behavior, beliefs and values and their formation. Additionally, they affect the generation of health norms. With regards to adopting such behavior, laws, policies and often, beliefs, are of effect (Thomas, 2006, p.3).

Kreps (2003, p.355), on the other hand, suggest categories of intrapersonal, interpersonal, group, organizational and societal levels. The communication levels according to Kreps are summarized as below:

- Intrapersonal attitude of the individual: The individual's health behavior, values and decisions are influenced by their moods and relevant processes.
- Interpersonal health communication inquiry: This type concerns the effects of health communication in the environment of health services, which often employs this type of communication, as well as the quality of the outcomes they cause in the behavioral changes of individuals and societies. For example, a pharmacist, directly

communicating with a patient in a pharmacy, and the patient's correct use of an effervescent is an example of successful interpersonal health communication.

- **Group health communication inquiry:** A group consists of individuals with ties to each other. Family, the smallest unit, also falls under this type. This type of inquiry examines disease support groups and associations with regards to their communicative processes.
- **Organizational health communication inquiry:** This type encompasses the communication necessary to relay health information on a large scale and deliver health services. It deploys various health professionals and involves communication in the stage of formation of health services.

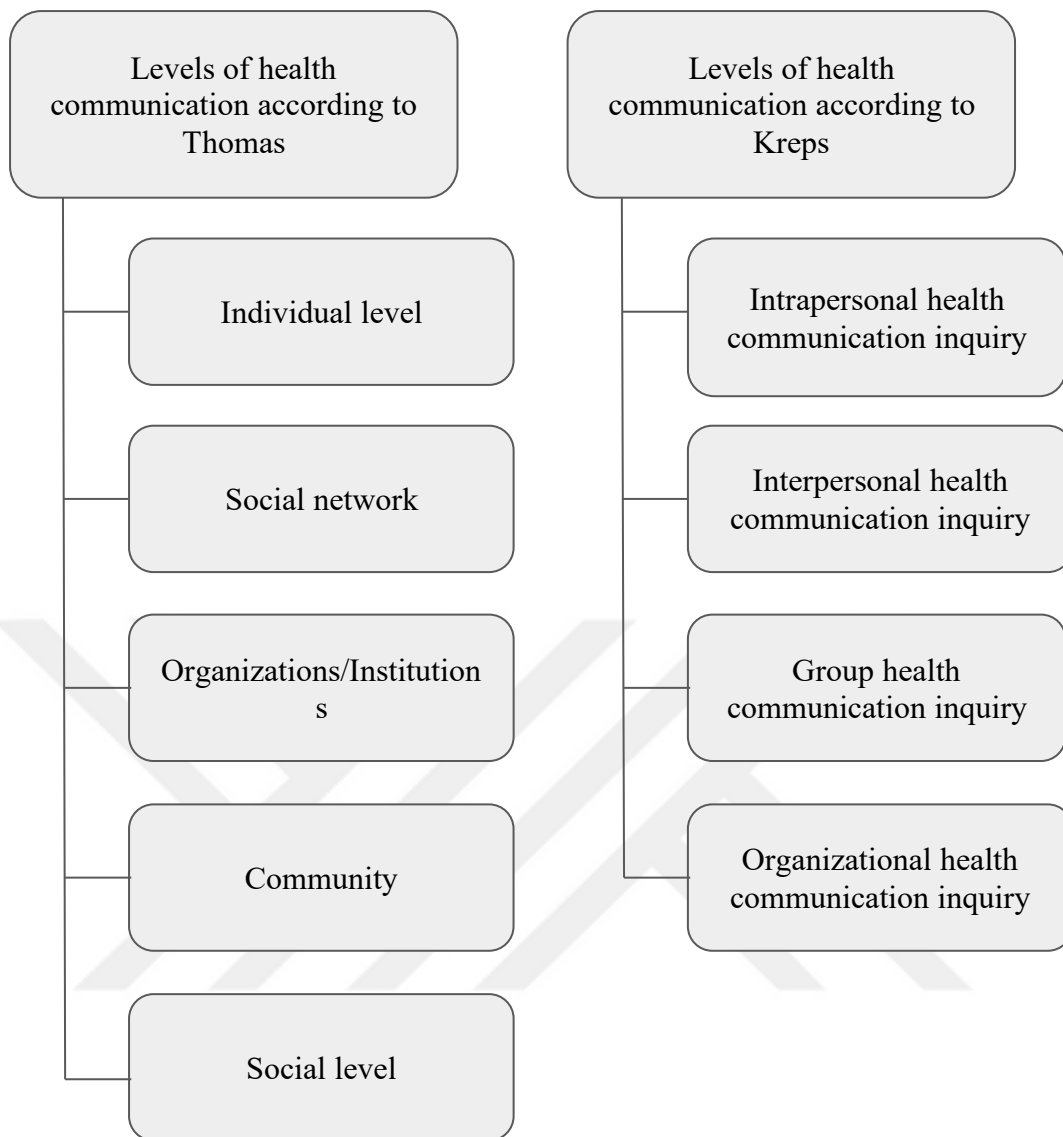


Figure 3. Levels of health communication according to researchers

2.1.4. The purpose and significance of health communication

The most essential characteristic of happy individuals is happiness. Being happy is the primary priority of our lives. Health is sometimes viewed as an opportunity by individuals. Health, for an individual, is an important basis of their complete well-being. It is a common goal of human life since the day we are born until the day we die. Therefore, protecting the self from diseases and the state of being healthy is quite important (Ertekin, 2017, p.13).

Individuals, who aim to sustain ‘good’ lives, consider first and foremost, preserving their health. When they catch a disease, they seek the most suitable and correct method. As they search for a method, individuals often turn towards health communication. Sources that implement right and effective health communication, as well as health professionals, support the individuals throughout this decision making process. Individuals aim to preserve their health for a good life as a priority; thus, ‘avoiding diseases’ appears as a significant element. While raising awareness in health can be observed in many instances, it is currently integrated to our modern lives (Hülür, 2016, p.158). Health communication targets the society. Value judgments, rules, ideas and behaviors of the society accumulate knowledge on various media within the extent of existing laws and influence the health behavior of individuals. The main purpose of health communication is to affect individuals’ health behavior and create health awareness on a social level (Şengün, 2016, p.79). Much like health sciences, health communication is also more than a branch that merely approaches medical knowledge and diseases; it is a discipline that advances with a number of scientific areas concerning human beings (Çınarlı, 2008, pp.46-47). Its coexistence with other scientific areas also helps health communication to fulfill its purposes.

Schiavo (2007, pp.8-10) examines the aims of health communication in six categories – informing and influencing individuals and communities; motivating., creating behavioral changes; enhancing accumulated knowledge in health; building two-way communicating and exchanging information. They are summarized as below:

Informing individuals and communities, influencing personal and social decisions: This type comprises of communicative processes, carried out to generate

both individual and social health decisions, improve health and enhance health-related knowledge of a particular society.

Motivating individuals: It is the endeavor to motivate individuals first, then the society, to acquire information about health and to create the right behavior.

Changing behaviors: It is the process to create changes in attitudes and behaviors related to health in the target group within a designated period of time.

Informing individuals in health and creating awareness in health: It has to do with improving the existing knowledge of health of individuals and the society and ensuring they have a good grasp on health problems and the current health administration processes, hence strengthening their knowledge of health.

Two-way communication: It refers to the joint and bilateral process between stakeholders, as health communication is carried out.

Knowledge exchange: At this stage, there is a mutual transmission of ideas, information, methods and knowledge between two stakeholders within the communicative process. The message is perceived by the receiver and feedback is provided.

The aims and processes of health communication have naturally gone through certain changes to date; they evolved and improved. In this context, the next section will investigate the historical development of health communication.

2.1.5. History and development of health communication

Communication in health is not only effective in terms of increasing the level of knowledge, but also in terms of the well-being of the patient. An eminent name in

medicine, Hippocrates once stated that the physician's behaviors influence the health of patients as well. Hippocrates described the term, 'placebo', which is known today as the psychological well-being of the patient, with the following words: "Despite the excellent health of some patients, they would regain their health upon the physician's confirmation that they are, in fact, in good health" (Box, 2004, p.98).

A newly emerging concept in world literature, "health communication" was first used in 1970s in North America before developing and today, it represents an area of communication from different perspectives (Okay, 2016, p.14). The concept of "health communication" arose in 1971 by National Cancer Act (NCA) (Çınarlı, 2008, p.41). This way, the society was informed about cancer and its diagnosis and health communication endeavors were carried out in this respect (Keklik & Kaya, 2015, pp.26-39)

The existence of social sciences in health began in 1970 with HFA (Health for All) congress, continued with HFA 2002 strategy in 1980 and health communication as a branch, hosting health and communication together, gained importance (Avcı & Avşar, 2014, p.39). Later in 1972, a therapeutic communication group in affiliation with a communication association in USA was established and in 1975, the Department of Health Communication. Before 1975, health endeavors in communication were not following a particular format. Health communication was mostly carried out by health professionals. After 1975, on the other hand, communication endeavors started to witness the existence of competent experts in communication, in addition to health professionals. Moreover, a peer-reviewed journal by the name of Health Communication was launched by Lawrence Erlbaum Associates (Çınarlı, 2008, p.46).

The matter of health was not viewed as a significant topic in America until World War II. After the war, individuals began to place more importance on health; thus, information about health and practices to protect one's health began to be governed in more accurate and efficient ways (Thomas, 2006, p.39).

Personal health is on its way to be a trend in the 21st century. As a matter of fact, many personal blogs and influencers work in this area and produce content relating to exercises, nutrition and use of supplements and so on.

Health communication has a substantial content. It includes individuals, comprising the society, the society, health personnel, public and private health institutions, all groups in communication and their interaction with one another. It supports the emergence of the right health behavior as a result of this interaction.

Health communication has to do with raising awareness and consciousness with respect to all matters of health that concern the society and aims to relieve the worries about health issues (Tufan, 2017, p.28).

Thomas (2006) mentions five factors, influencing the developmental process of health communication. These are the new medical model, increasing consumption in health, implementation of health services according to socio-economic levels, preventing diseases before treatment and the need for marketing in health. According to the New Medical Model, medicine went through its 'golden era' in 1960s and 1970s, and communication with the patient lost its significance. A scientific era followed, when knowledge about diseases became ample and tools for diagnosis and treatment became abundant. Against this model, the increase in consumption developed. Some call this phenomenon 'the movement of educating patients' and some 'consumerism'. It was known with this movement that patients had insufficient

knowledge about health and were unsuccessful with respect to the right behavior in health. Over time, many health services offered in USA started to become discriminatory according to the socio-economic levels of individuals. This event manifests in the field of health as well. Observations in the behavior of physicians showed that their attitudes are different towards less educated patients with low financial power than those, who are more educated and with higher financial power. In late 1900s, a new concept for health became prominent. Preventing diseases before patients reach the stage of treatment gained importance. Preventative campaigns to remain in a state of well-being surged. Preventing the disease in the stage of well-being of the individual was observed to generate a more significant effect than treating it. With the increasing need for health communication and marketing and health systems advancing together contributed to the dissemination of health communication. Marketing in health communication is an area of marketing, including aiming for the marketing of an idea or an institution (pp. 41-43).

2.1.6. Theories and models related with health communication

Various theories can be found in the relevant literature, investigating the behavioral changes in individuals for the purpose of raising health awareness. In this context, health belief theory, theory of reasoned action, social learning theory, diffusion of innovations theory, stages of change theory and planned behavior theory will be analyzed in this section.

2.1.6.1. The health belief theory

The health belief theory posits that only the correct knowledge of health can ensure efficient health behavior. The individual must be aware of the factors that may

lead to a disease, show effort to prevent diseases and be motivated enough to apply to the relevant institutions after the disease (Sezgin, 2011, p.117).

The health belief theory improved its importance substantially after the Tuberculosis Screening Study conducted in USA. A health campaign was initiated for this study with factory workers as the selected target audience. Despite this campaign, workers' participation in the screening study was insufficient and this theory was developed consequent to this failure. According to this model, the orientation of individuals as they are forming health behaviors can be explained with five items. The individual must believe that they are at a severe risk concerning their health; they can be infected; the suggested solution is effective; there is exposure to a beginning for the individual to take action and the health problem can be prevented (Champion & Skinner, 2008, p.46).

Another example to illustrate the health belief theory can be the vaccination studies against covid-19 today. Throughout this process, the public has been worried about whether or not the vaccination, which is still under clinical studies, will be efficient. Therefore, individuals state that they do not want to be vaccinated. From the perspective of the health belief theory, individuals are aware of the risk and the fact they can be exposed to it at any moment; still, they do not display the correct health behavior with respect to the prevention with the thought that the treatment may be inadequate.

2.1.6.2. Theory of reasoned action

Developed by Fishbein and Ajzen, this theory sets forth that a reason must underlie the emergence of any behavior. The psychological infrastructure of individuals is important in behaviors. The person forms their attitude towards health

with the help of information acquired and the beliefs and ideas, established from the family and social circles (Blonna & Water, 2005, p.27).

Behavior begins with the desire and intention of the individual. The individual forms their ideas and thoughts to carry out the behavior. On the other hand, the formation of behavior is also dependent on the norms, shaped by the social structure of the society, in which the individual lives. For example, a person, who is addicted to alcohol, first observes the damage it has on body cells and the liver. Others around them state that alcohol has harmful effects in the social sense. The person realizes the physical and social damages and goes to a health institution to seek support. Initiated with intention, this situation ends with the actualization of behavior.

2.1.6.3. Social learning theory

Developed by Albert Bandura, this theory is also known as the Social Cognitive Theory. It aims to explain the personal and environmental factors surrounding individuals, as they actualize an idea, desire or behavior for which they aim. The reciprocal determinism is a three-tiered model; attitudes, situations that affect the individual and environmentally determined factors. These three tiers continually influence one another. During the stage of change in the time loop, one factor attempts to overcome another and the individual shapes their attitudes, ideas and desires accordingly (Young, 2005, pp.272-273).

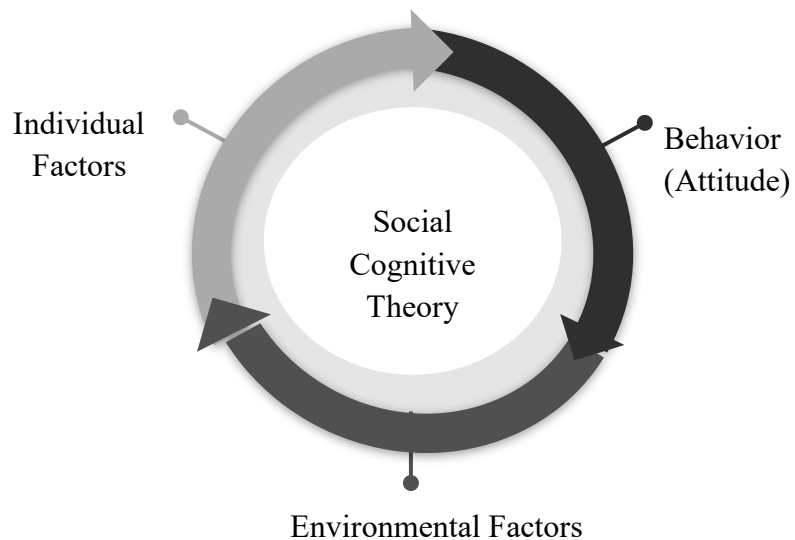


Figure 4. The Operation of Social Cognitive Theory
(Eagle, 2013, p.121)

Figure 4 illustrates the elements of Social Cognitive Theory. Environmental and individual factors step in for the behavior to be carried out. These determinants can oftentimes be supportive or challenging. Individual factors can be explicated as the individual's knowledge, motivation or skills. On the other hand, environmental factors refer to the family, friends, peers or the structural environment.

According to Bandura, the actualization of behavior depends on their potentially positive or negative consequences. In contrast, individuals also display behavior that do not yield negative impact in the short term, but may lead to negative outcomes over time. This dichotomy can be explained with the extending pleasure of the positive state in the short term, in comparison with the negative ones in the long term (Çınarlı, 2019, p.129). A suitable example of this phenomenon is a person, who does not pursue a healthy diet and consumes a lot of sugar; despite knowing that they have a higher risk for obesity and cardiovascular diseases in the long term, the happiness they seize in the short term is still more motivating.

2.1.6.4. Diffusion of innovations theory

The Diffusion of Innovations Theory predicts that awareness can be raised in societies that are less developed with respect to social matters such as health, environment, cultural and social issues, as they are covered more frequently in relevant media. The behavioral changes of the individuals in the society are considered to be innovations (Çınarlı, 2008, pp.136-137). According to this theory, the inclusion of the leader of the innovation in the process and the displayed behavior in this sense accelerates the diffusion of the innovation in question (Green & South, 2006, p.149).

Preferred channels of communication are also important factors in the Diffusion of Innovations Theory. Selecting the appropriate medium for the target audience ensures that the message is delivered to the receivers. One of the most widely preferred channels is the internet. A suitable example for the use of internet in health campaigns might be the “Ice Bucket Challenge” in 2014 to raise awareness to ALS, the cure of which is yet to be found. Throughout this campaign, individuals either donate 100 USD to ALS Association or pour a bucket full of ice water from their heads. Public figures supported this campaign over their social media accounts and collected donations with the pouring of ice water from top down. Within the scope of this campaign, 17 million people shared ice bucket videos and it became a hot topic on Twitter. At the end of the 8-week campaign, a total of 115 million USD was donated, while this number was a mere 23.5 million USD the previous year. ALS Association also announced after the donations that they have made significant way towards a treatment for ALS this way (Çınarlı, 2019, pp.138-139).

2.1.6.5. Stages of change theory

The Stages of Change of Theory, also known as the Transtheoretical Model, developed by Prochaska and DiClemente, examines the quitting stages of alcohol addicts and smokers to understand and measure their health behavior. This model posits that the stages of behavioral changes consists of six phases (Maicbach & Parrott, 1995, pp.217-225).

Precontemplation: The person does not feel discomfort regarding their situation or does not notice the severity of it. Therefore, there is no plan for any behavioral changes. The awareness of those around the person may be in question at this stage sometimes, instead of the individual.

Contemplation: The individual deems a behavioral change suitable at this stage and seeks an efficient method. They evaluate the methods that may be applied in the stage of behavioral change.

Preparation: Prochaska names this stage “preparation”, whereas Thomas names it “decision making”. A plan is prepared before taking action. Past and failed experiences may be used in this stage as well. For example, a person, who tried to quit in the past, may try again later, despite their failure to do so in the past. These individuals plan to take action soon.

Action: The individual takes action to carry out the correct health behavior in this stage. Accumulated knowledge, attitude or environmental changes may sometimes be required to that end. If the individual can sustain the correct health behavior for up to six months, they would pass from this stage. The purpose of this stage is to come up with a solution for health problems.

Maintenance: This stage concerns the individual's health behavior becoming a habit, as the individual sustains said behavior. At the end of the sixth month, the individual should be able to maintain it

Termination: This stage is the completion of the individual's stage of change and the last step, when the individual does not display effort for the problem to reemerge (Maicbach & Parrott, 1995, pp.217-225 cited in Okay, 2012, pp.82-83).

These stages are illustrated in Figure 5. The self-sufficiency of the individual during precontemplation and contemplation stages tends to be low, whereas it gradually improves towards maintenance (Eagle, 2013, p.129).

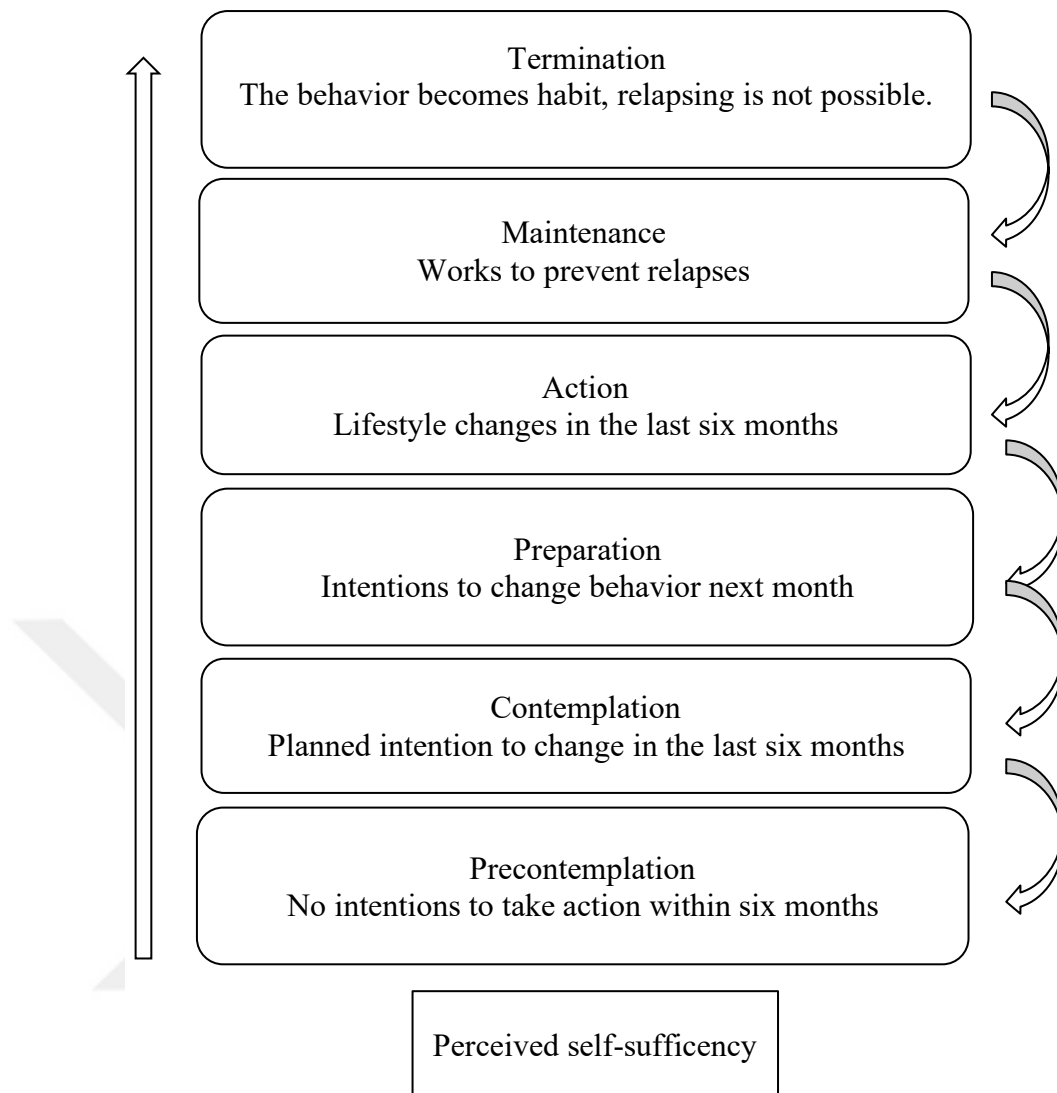


Figure 5. Stages of change theory

(Eagle, 2013, p.129)

2.1.6.6. Planned behavior theory

This theory has been developed in 1975 by Fishbein and Ajzen, based on the Theory of Reasoned Action. While the latter only highlights the significance of the action, Planned Behavior Theory is formed with the addition of perceived control for said intention to be actualized (Ajzen, 1991, p.203).

The Planned Behavior Theory reveals a connection between control and behavior during the actualization of behavior. For example, two different individuals who both decide to lose weight, may go on a diet with the same intentions, but over

time, only the more ambitious one with more control over the process will lose weight.

Ajzen (1991, p.188) argues that behavioral intention comprises of three main concepts.

1. Attitude towards the necessity of a behavioral change
2. Subjective norms
3. Perceived control in the actualization of the intention

The main hypotheses of this theory are as follows:

- Intention is the first step towards behavior.
- Intention is expressed by means of attitude towards the necessity of a behavioral change, subjective norms and control in the actualization of the intention.
- Beliefs are based on individual, external and socio-demographic qualities.

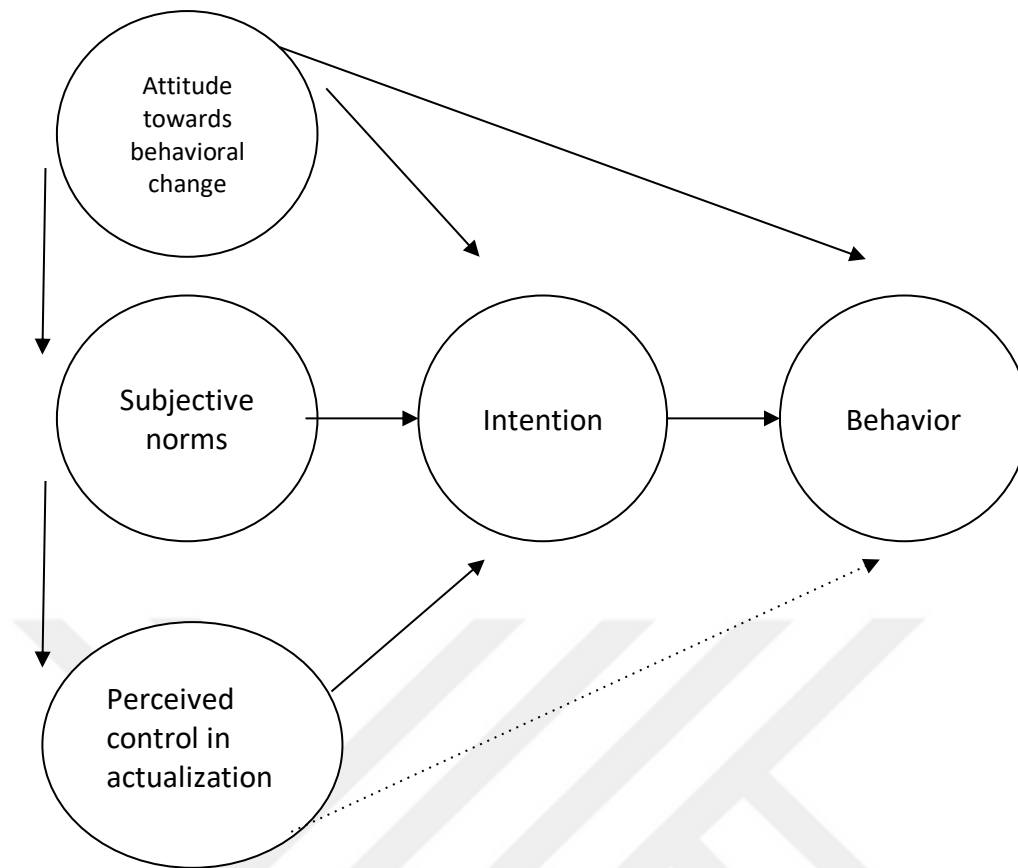


Figure 6. Planned Behavior Theory

(Ajzen, 1991, p.182)

Thoughts regarding behaviors: This refers to the positive and negative thoughts of the individual to actualize the behavior towards said behavior.

Subjective norms: This refers to the social pressure the individual perceives from their environment regarding the behavior to be actualized. It has to do with the pressure from the people about whom the individual cares that may be expected in terms of the actualization of the behavior or after it is carried out already.

Perceived behavioral control: This refers to the perception of the individual and the powers they do not possess (money, time, skills and so on), as they actualize the expected behavior or display the attitude (Erten, 2002, p.223)

The next section examines campaign examples, carried out as per the theories used in health communication, and the fundamental principles they must include.

2.1.7. Health communication campaigns

There are four main principles in general that any communication campaign must have and they are the same for health communications as well. These are (Rogers & Storey, 1987, pp.818-820):

1. A communication campaign has a prioritized objective and it aims to call out to a certain group.
2. A communication campaign, first and foremost, aims to reach a wide group.
3. Communication campaigns are planned to be executed within certain timelines. They must have start and end dates.
4. A communication campaign is not limited to a single activity; it encompasses a series of communication processes.

Carried out as per these four main communication principles, the first health communication campaigns were executed in 1700s in America. The first campaign, in this context, aimed to raise awareness for smallpox vaccine and to persuade individuals to get vaccinated. Another health campaign around the same time, on the other hand, was carried out against alcohol abuse (Okay, 2016, pp.116-117).

Overall, health communication campaigns are carried out on more extensive scales than others; but they also contain a more challenging objective. Health campaigns can be organized on a wide range of topics from Covid-19 infections to obesity awareness and vaccinations. As communication means prosper and change over time, selected media in campaign managements vary accordingly.

While health campaigns are carried out by a number of societies, they often aim for the same objectives; reaching a wide group of individuals, informing them about health, raising consciousness and creating behaviors. To that end, campaign foundations include the following qualities.

- One sided communication
- Brief and clear expression of the objective
- Ensuring the society places importance on the topic by using visual content and scaring them if necessary even
- When necessary, using exaggerated visual content (Okay, 2016, p.122)

Due to appealing different groups than one another, health communication is the type that is attempted to be carried out via a number of ways. Much like any type of communication though, first thing to do is to identify the target audience; otherwise, communication could not be ensured, for the lack of right targets would mean the lack of right communication. Therefore, the target group must be identified accurately.

The world of internet today brings about myriad benefits to users, in addition to very fast access to content and information. As access to information is evaluated in the field of health, a similar outlook can be viewed. Individuals, who resort to internet searches about topics in which they would like to be informed, can find information regarding health whenever and wherever they are, as well as seeking other individuals' opinions and finding similar groups as themselves. This is frequently observed in individuals, who suffer from chronic diseases such as cancer or cardiovascular disorders, as they seek information from the internet. Individuals often

use the internet, when they need urgent information about a disease or sickness they experience (Zülfikar, 2014, p.47).

The results of a survey, conducted in 2012 throughout a month with 3014 individuals, reveals that one person out of every three in America resort to internet to seek health information. According to the survey, 35% of individuals use internet and social media to be informed, when they have a health problem, and 77% of them self-diagnose with the information they acquire. Almost half of these individuals, who seek information on internet and social media concerning a health issue, self-diagnose and then see a physician and 41% of them receive the confirmation about their own diagnosis from the physician. Those that self-diagnose online are mostly women and university students. Within the scope of this survey, 72% of the respondents, who have constant internet connections, prefer online platforms to acquire information; 77% prefer various search engines; 2% prefer wikis such as Wikipedia that provide general health information; 13% prefer health sites such as WebMD and 1% prefer social media for research purposes. During these research endeavors, 26% of the respondents stated that they saw a payment screen and only 2% of them made payments for information, while 13% finalized their online search after seeing this screen and 83% left the platform to find information on other web sites (Fox & Duggan, 2013, pp.2-5).

According to another research study, conducted in Turkey by institutions that work on cardiac diseases, investigating health communication on social media, found that social media ensures information equality with health information and provides opportunities to communicate with the society in terms of health. In contrast, non-governmental organizations in Turkey with a focus on cardiac health appear to fail in seizing such opportunities, for they do not actively use social media channels, which

provide interaction-based communications. From this framework, health communication endeavors can be integrated with social media channels, which are significant sources of information, to relay health messages to users. Allowing interaction within the circle of health amongst patients, patient relatives and health workers, social media can carry great importance in the field of health with respect to raising consciousness and awareness. In this stage, right target groups must be identified and social media messages that allow bilateral communication must be formed (Öztürk & Öymen, 2013, pp.115-117).

2.2. Social Media

Since concepts of health and health communication are examined in the previous sections, the concept of social media is scrutinized in this section as another key topic for this research study. Social media as a concept is, without a doubt, explained alongside the usage of internet. Internet has currently become an indispensable part of everyday life.

According to Turkish Statistical Institute's declared ratios of internet use in Turkey in 2020; 79.0% of individuals at the ages of 16-74 use the internet, whereas this ratio was 75.3% in 2019. Furthermore, men use the internet more than women do (Turkish Statistical Institute, 2020).

The results of the social media usage survey by We Are Social and Hootsuite in 2020 as they do each year were shared in January 2021 in the report "Digital in 2020 Global Overview". These data provide information about how online communication channels are used in 246 countries. Accordingly, 59.5% of the world population are active internet users, whereas the use of social media is at 53.6%. The world population increased by 1% from 2020 to 2021 and the overall use of internet

increased by 13% with the pandemic. Data regarding internet and social media use in Turkey, on the other hand, shows that 65.8% of Turkish population; namely, 65.80 million people, are connected and 60 million people are active social media users (Digital in 2021 Global Overview, 2021).

The concept of social media in literature reviews is often explained alongside Web 2.0. Developed after the technology of Web 1.0, Web 2.0 allows individuals to assume active roles in online channels (Alexander, 2006, p.32). The internet is not only a means of communication with the active use of Web 2.0 technology anymore for individuals, but also a means of socialization (Erkul, 2009, p.98).

As social media improved, it created various opportunities for internet users such as getting in contact with strangers, finding old friends and establishing individual spaces (Boyd & Ellison, 2007, p.211). Thus, the use of internet and social media gradually improved after providing opportunities to individuals such as socialization and building their own platforms and to companies, commercial ones.

As another title in the research study, social media can be defined as an online platform, integrated with internet, where individuals can instantly share expressions, voice their feelings, emotions and thoughts and provide details from their lives (Paul, 2011, p.265).

2.2.1. The definition of social media

According to Internet World Stats (IWS) data from November 12th, 2020, a total of 4 billion 929 million people across the world use the internet. The same study also states that as of June 30th, 2020, there are 69 million 107 thousand internet users in Turkey and 52 million users of Facebook, which is a social medium. These

numbers and results show that social media users increase in numbers day by day on both global and national scales (IWS, 2020).

Bruns and Bahnisch, on the other hand, define social media as the online platforms that emerged post-Web 2.0 technology, ensure interaction and communication between individuals and support the formation of organizations (Akar, 2011, p.17).

Ellison, Steinfield and Lampe (2007, pp.1148-1149) define social media, on the other hand, as a system of online tools that help users interact with other users, access the content of those they follow, share their personal lives via using certain features with profiles they can either use publicly or in a limited fashion, only shared with those they are in interaction with. The distinctive aspect of social media in comparison with others is not only the opportunity for targeted individuals to communicate with each other, but also the possibility that allows them to follow the content other users they interact with share, as well as to be able to freely speak their minds.

Thanks to Web 2.0 technology, many definitions can be named and they are often used interchangeably. Studies on this topic often use definitions such as social media or social medium instead of Web 2.0 (Berkmani, 2000 cited in Gülnar & Balcı, 2011, p.43).

The world of technology evolves over time and new needs arise with the individuals' increasing use of the internet. The world of internet began with Web 1.0. This name is often used to distinguish between the historical periods of the internet and the differences are evaluated with regards to the internet itself, users and content generators. Web 1.0 is a closed system in itself, whereas Web 2.0 later started to

allow users to create their own spaces and interact with other users by accessing their spaces.

Table 1. Differences between Web 1.0 and Web 2.0

Web 1.0	Web 2.0
Designed by software developers.	Designed by users.
Content is prepared by certain individuals.	Content is prepared by everyone.
Users cannot intervene in content production.	Platforms based on shares
Content is produced less, used less and therefore, is controlled less.	Content exchange that is produced and shared is quite a lot, which is why supervision is not frequent.
One-way communication	Two-way communication
Accurate informing is aimed	Ensuring that users are included in the information provision system (e.g. Wikipedia)
Presenting and publishing	Users and programmers can both generate content
Hierarchical order	Free order

Static shares	Updated shares
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Source: Bozarth, 2010, p.12

Developed along with the technology Web 2.0 offered, social media has the qualities of having its content, generated by everyone; in this sense, content is not generated only by the programmer or the owner of the space, but also by users, which is why supervision is not quite possible at all times. This notion appears as a problem in fields of health and medicine.

Nalçaoğlu (2003, p.44) evaluates how newspapers, radio, television respectively and communication tools such as social media nowadays reflect on societies as of 1920s. Mass media affect and change individuals' mentalities and lifestyles. This change can occur in cultural and social senses, while social change can be constructed as such too.

The use of social media with the increasing shares of research and information in health and medicine unfortunately brings along risks and ethical issues as a result of including misinformation. The quality, accuracy and clarity of existing information in health worry health authorities and health professionals (Berland et al., 2011, p.26). It might be difficult to separate accurate information from inaccurate or ungrounded information (Lehmann, 2013, p.547).

Social media is frequently used today to acquire health information. It is not only a source for users to seek health information; it is also widely used by health professionals.

A study, conducted on the use of internet around the world, revealed that online users benefit from the internet to access health information. Drawing off on

daily searches across the world, the internet use is observed to involve 4.5% of the searches in health content (Bass, 2006, pp.219-236).

Social media is not only used by youth; public and private enterprises, political public figures and representatives use it too. Specifically, social media such as Twitter and Facebook are accepted and began to be used by upper levels of the government and government institutions. The success rates and the existence of executives on political and public platforms decline, if they do not exist in such spaces. As the importance of social media use increased in political and public orders, the importance of using this space in the correct and efficient ways also increased. Central and local administrations and institutions began to adopt and create various social media strategies.

A research study, conducted by the Ministry of Health concerning social media use specifically on Facebook and Twitter, highlights that in many public services such as information provided by the institution, public relations information, educational content and crisis management, the Ministry uses social media communication in a right and effective way (Erkek, 2016, pp.141-150).

Another indicator, emphasizing the importance of using Twitter in health communication, is the observation that Turkish Ministry of Health has had a Twitter account since 2012 and posted 18.567 tweets until April 2021.

In addition to the accurate awareness public institutions and official pages raise, users' generation of content in social media may still lead to some unwanted consequences.

From this perspective, the Twitter account @SağlıkNotu (healthnote), scrutinized in the study Çobaner and Köksoy conducted, catches attention. With a

total of 92.900 followers, @SağlıkNotu account is widely followed, yet is thought to present a risk for public health due to its lack of reliable content generation and supervision. Information regarding health on social media aims to improve accumulated knowledge and provide quality for health; still, unsupervised, exaggerated and unrealistic information flows are sometimes observed at this point as well (Çobaner & Köksoy, 2014, pp.899-906).

2.2.2. Characteristics of social media

The fundamental unit of social media is its users. The user is the artist of the social media and is oftentimes the person registered at the medium with their own space, able to express themselves therein. However, sometimes they have the means to access content on the medium without registration. Users can be individuals, groups, communities, associations, institutions or enterprises. Social media does not only allow individuals to create a space and share posts, but also allow interaction amongst them. This communication brings about social networks. Social communication includes formal or informal types of communication and various purposes such as business, friendship or common causes. While users establish links with each other, they could also take advantage of the opportunity to communicate and connect with one another by looking at other profiles, shared posts and connections (Mislove et al., 2007, p.30).

Social media users are able to clearly communicate their traits via the internet (Hazar, 2011, p.32). This free environment ensures that individuals are more laid back in communicating and they can find other users with whom they can connect rather easily.

Social media is not only a medium used by individuals. It is, at the same time, a space that institutions and companies use to promote themselves and convey their messages accurately.

According to Safko (2010, pp.7-10), social media is not only an individually used space. Private enterprises and organizations or government institutions use social media to introduce themselves and relay the message of their chose to their followers or users. For private companies, social media means having access to customers with the mediation of technology, generating trust for the brand and communicating with the customers.

Various characteristics of social media pave the way for social media to be used in health communications. These characteristics are listed below.

- It has a highly ratable and accessible technology.
- It generates a mass effect that is quite difficult to predict.
- Social media use is of benefit for the individual.
- Mutual interaction is possible.
- Social media provides means of communication for users to discuss different topics (Blossom, 2009, pp.30-32 cited in Akar, 2011, p.21).

Thanks to these characteristics, health communication is commonly used with social media, as can be seen in everyday lives. It carries great importance that social media can reach large groups in a brief time with respect to the prevention of diseases. Thanks to mutual interaction, individuals can quickly find answers for their questions and health awareness on an individual level is hence raised.

2.2.3. History and development of social media

The very first initiative for a social network belongs to former IBM employee, Ward Christensen, with the possibility to send messages to other persons in the group in 1978. This came as a result of a software called Bulletin Board Services (BBS). BBS social network example helps online individuals to instantly text one another, share data and play games, thus communicating and interacting with each other (Scott & Jacka, 2011, p.6).

Similar to the conditions of use today, social media began in 1989 with an online platform called Open Diary, where individuals write in their diaries and get together on this platform. The same year also witnessed the emergence of blogs with Weblog. Along with the increase in Internet use, social media such as Myspace (2003) and Facebook (2004) were developed and these developments continued later as shown below (Kaplan & Haenlein, 2009, p.60).

Table 2. Chronological list of social media sites

Year	Social Media Sites Come into Service
1997	Six Degrees.com
1999	LiveJournal, Yahoo Messenger, MSN Messenger
2001	Wikipedia
2002	Friendster

2003	LinkedIn, Myspace, Xing, Hi5, Skype
2004	Orkut, Gmail, Flickr, Facebook (only in Harvard)
2005	Qzone, YouTube
2006	Twitter, VK (Russia)
2007	Tumblr, Friendfeed
2009	WhatsApp, Weibo
2010	Instagram, Pinterest
2011	Snapchat, Google+, Twitch
2013	Vine, Google Hangouts
2015	Periscope
2017	Tiktok

Source: Bostancı, 2019, pp.29-30

According to the 2013 data from Turkish Statistical Institute, 49% of households in Turkey have internet connections and this rate increased to 90.7% in 2020 (TSI, 2013; TSI, 2020).

Consumer behavior in today's world also began to change substantially with social media use. This change is observed in many disciplines and naturally, the

health industry also received its fair share from it. The need for online platforms and social network use increases for health with every passing day.

Internet searches are almost always conducted in health-related purchases. In terms of physician or hospital selections, individuals absolutely read comments of other users and search for further information. The same sensitivity can be observed in the search for disease symptoms and potential side effects of medicine; following success stories, shared on personal blogs or forums or communicating with health specialists. These are merely a few reasons as to why individuals turn to internet and mobile platforms for information. Internet is chosen to access all types of information concerning diseases. The process of sharing knowledge and experience on online platforms gives the individual ideas about many topics such as physicians, hospitals, diseases, courses of diseases and treatments, and affects their health behavior. Consequently, health authorities, institutions and health professionals aim to generate the correct health behavior via the use of various social media (Tosyalı & Sütçü, 2016, p.14).

Results of a 2011 study in Turkey, conducted on the underlying reasons and frequencies of physicians' and patients' use of online platforms, revealed that almost all of the physicians are active users, while 47% of them specify that they use the internet for scientific purposes. Searches for health on the internet, on the other hand, concluded that 42% concerns acquiring information about diseases; 40% concerns searching for the efficiency of a particular drug and 32% concerns posting on social media concerning ways of treatment, drug recommendations and side effects. Thus, social media in health communication is observed to provide temporal and economic advantages to both the individuals, who wish to be informed about the disease, and health institutions, raising awareness regarding institutions and their marketing

activities and as a result, accelerating individuals' access to health institutions (İlgün & Uğurluoğlu, 2017, p.30).

As social media is frequently used by individuals to acquire health data, institutions and companies began to use social media more as well. In a study conducted in USA on the most widely preferred 100 health institutions revealed that many of these institutions actively use social media and are present on more than one social media network (Smith, 2017, p.198).

Another study that assesses the social media use of health institutions in Turkey shows that Facebook has the highest rank and is followed by Twitter, then Instagram. Accordingly, these platforms are used for various marketing activities, including promoting the institution, sharing health information, raising health awareness in the society and differentiating from competitors (İlgün & Uğurluoğlu, 2018, pp.4-5).

2.2.4. Social media tools

The investigation of the use of social media networks shows that they vary in purposes. They are selected as per the purpose of use. Among these networks, the most widely used ones across the world and in Turkey are Facebook, Twitter, YouTube and Instagram.

The internet provides both the individual users and health professionals the means to acquire various health information, regardless of time and space, in a fast manner and on a global scale, along with the chance to connect with the individuals with similar experiences and information search, and experts. From this perspective, patients, who seek information, and their close ones, access the information very rapidly with the internet. Other users are also observed to form various support

groups, where they can share their experiences in health and sickness, support one another on common ground and share the latest developments (Mullner, 2002, p.491).

Social media tools provide users the possibility to join experienced groups to share their experiences with a disease or learn those of others. These groups can oftentimes yield positive results for the psychological well-being of the person, after communicating with those, who have similar experiences, and sometimes give way to various ethical and health-related issues in line with disseminated misinformation.

According to a study, conducted in 2013 in America by Steehler, 88% of internet users search for topics related to health, 20% access health service information by using social media and within this 20%, one out of every four persons think social media is effective in their health decisions. Another study, conducted in 2014 by Bottorff, on the other hand, reveals that nearly 70% Canadians, who are at the age of 16 or above, resort to the internet, when they do research concerning health. Antheunis et al. (2013) evaluated the social network use of 153 physicians, working in gynecological diseases and 139 patients, receiving treatments in gynecology, and concluded that 31.7% of patients and 26.8% of physicians prefer social networks. The primary selection of patients is Facebook and Twitter, while physicians use LinkedIn and Twitter more. The reasons underlying social media use of patients in health research, on the other hand, are observed as acquiring information, communicating with physicians, support in the form of experience sharing and personal healthcare, whereas physicians mostly use the internet to acquire information, communicate with patients, promote themselves and communicate with other health professionals (Tengilimoğlu et al., 2015, p.80).

2.2.4.1. Facebook

According to Internet World Stats (IWS), there are 2 billion 224 million Facebook users across the world as of January 31st, 2020.

Facebook was founded by Mark Zuckerberg in 2004 with the purpose of sharing images and videos among students of Harvard University at the time. Now, it has become one of the tools that allow people to share their personal lives on internet (Özkaşıkçı, 2012, p.51).

With respect to its use across the world, Facebook overwhelmingly surpasses its competitors and ranks highest among social sites. While Facebook is used around the world and ranks highest, China has QZon and Russia has V Kontakte in their highest ranks as their own national pioneers (Kahraman, 2013, p.23).

Another trailblazing characteristic of Facebook is its means to provide a setting for people, gathering for a common cause, and personally make their voices heard. Thanks to its feature of creating groups, users can exchange ideas with others, with whom they find common ground as themselves, meet them and organize events. Myriad information can be found on Facebook. Specialists can share information and persons in the group can exchange information via their shared experiences. That is, of course, a specific observation for the field of health (Işık, 2019, p.101).

In addition to being widely used in areas such as business, economics, culture and social world, Facebook has also begun to be used in the health industry. Individuals, who wish to acquire information on health from various social media, use Facebook from amongst them with a ratio of 75%. There are approximately 2,000 groups on diseases on Facebook. Additionally, health professionals are observed to

communicate with users via this channel for information purposes (Kayabalı, 2011, p.17).

Griffis et al., conducted a research study in America on social media use of 3,371 hospitals, where they found that 99.41% of these hospitals have both Facebook and Foursquare accounts, 99.14% have Yelp and 50.82% have Twitter accounts. On the other hand, only half of these hospitals use all of these four social media accounts simultaneously. Hospitals that use social media actively are observed to be located at city centers and teaching hospitals. Moreover, 1.25% of them have only one or two social media accounts. As a traditional means of communication, telephone and e-mail habits began to change alongside the use of social media, while social media use in terms of raising awareness for diseases, informing people about social health matters and spreading new developments and success stories at hospitals became more and more common (Griffis, 2014, p.16).

Similar to the rest of the world, Facebook is the most widely followed social network in Turkey with the highest number of users among others. In a study conducted in 2013, 12 accounts with health posts that have the highest engagement rates on Facebook are examined. Consequently, it was found that in 6 months, 2,362 posts were shared on these twelve Facebook pages and 73.12% of them were health-oriented. Moreover, 51.86% of the shared posts do not reveal any sources. Due to being widely followed and visited by numerous people every day, health pages should not have scientifically weak infrastructures, which is a noteworthy point (Şener & Samur, 2013, pp.508-523).

Social media use in health communication with purposes such as raising awareness for diseases, improving existing awareness and product promotions can be of benefit to improve health behavior in the society. However, since social media

content can be generated by anyone and is accessible by everyone, misinformation or disinformation instead of accurate information can yield negative results. Consequent to the rapid flow of social media communication, inaccurate or ungrounded information can cause much work in terms of their rectification. In addition, communities that have no access to internet or social networks may not receive sufficient information, which is another negative aspect (Chou et al., 2009, p.2).

2.2.4.2. Twitter

Twitter is the social media platform, where users, who sign in can write messages called “tweets”, limited to a maximum of 280 characters, and share their ideas such as in a blog post.

Twitter is a medium that allows much shorter posts. Therefore, advertising revenues via banners are not used. Despite the lack of advertising content, its number of visitors increased up to 13 times in 2009 and it started to be used as frequently as other media (Işık, 2019, p.103).

Consequent to the recent technological developments, Twitter became a significant social media tool, as it became possible for individuals to post news and comments and form public opinion concerning national and international events and react to them via instant communication. A suitable example for this phenomenon could be the Gezi Park events in Turkey. Twitter today has become an important platform of significant news, thoughts and opinion polls that is even used by researchers (Işık, 2019, p.104).

When Twitter was first founded, the number of characters for a tweet was limited to 140 until 2017, after which this number was increased to 280 characters. Twitter is the medium of expressing oneself with the minimum number of characters.

While the emphasis is on words on Twitter, photographs, videos and links can also be shared (Bostancı, 2019, p.47).

Thanks to synchronous and bilateral communication it offers, Twitter allows health institutions, patients and patient relatives to communicate with health professionals, as well as others, who have been through a similar process with their disease to share their experiences; this communication on Twitter network increases over time (Öztürk & Öymen, 2013, pp.115-117).

The example of Covid-19 pandemic also reveals that communication was largely managed via social media. According to a study by Sarı & Gemlik, World Health Organization posted 153 tweets on their official Twitter account @WHO in the first seven days of the pandemic, all of which aim to inform people across the world to decrease the risk of infection. Secondly, they posted about ways to prevent being infected and informative messages that include patient groups with special needs (Sarı & Gemlik, 2020, pp.1-13).

2.2.4.3. YouTube

YouTube is a social medium for video sharing purposes, founded on February 15th, 2005. Individuals can view the shared videos without signing in to YouTube. In addition, subscribers can form a special channel for themselves and share appropriate content (Erzurum, 2017, pp.366-367).

With over 1 billion users, social media platform YouTube is also among the most widely preferred ones for health communication. Every day, 30 million people watch videos concerning health (Haslam, 2019, p.54).

Social media has become a rather convenient field to gain information about diseases and raise awareness. Having noticed this, health professionals, health

institutions, health associations and pharmaceutical companies often use social media to raise awareness in health. The website of Accu-chek diabetic measurement mechanism brand under Roche pharmaceutical company, <http://www.accu-chekdiabeteslink.com>, includes videos and articles to raise awareness for diabetes and provide recommendations to patients. At the same time, the website works in an integrated manner with Facebook, Twitter and YouTube, aiming to improve communication with the target group. The brand had about 50,000 followers on Facebook in 2016 and the 58 videos on YouTube have been watched in the last 6 years by approximately 260,000 persons (Tosyalı & Sütçü, 2016, p.17).

YouTube is also a platform that is widely used in health campaigns. To illustrate; videos on YouTube have been published to raise awareness for smoking, being one of the risk factors of breast cancer, within the scope of health improvement campaigns for young people (Sakaki, Okazaki & Matsuo, 2010, p.60).

2.2.4.4. Instagram

Founded in 2010 by Mike Krieger and Kevin Systrom, Instagram is a mobile social network for photograph and video sharing by combining Polaroid and digital effects, and it is highly popular in terms of use. While Instagram initially only allowed to take photographs and share them with various filters, it started to allow video sharing over time too. After the video sharing feature was included, 5 million video content was shared in merely a day on Instagram (Çetinkaya & Cılızoğlu, 2016, p.169).

Instagram is a photograph sharing network and that is why it is important for the users to take photographs they like and arrange them with filter applications. It is usually important for Instagram users that their posts attract likes; therefore, they

work hard to take photographs that would be liked. In addition, Instagram organizes certain virtual events on weekends about designated topics and ensures that posts about them are seen by wider groups of people. Hashtags on Instagram makes sure that posts reach more people. Users can increase their engagement rates by adding a hashtag that is popular and frequently used or has to do with the concept of the shared post. Some of the popular and frequently used hashtags can be listed as #love, #instagood, #photooftheday, #instamood, #iphonesia and #tbt (Özutku et al., 2014, pp.138-139).

In addition to socializing via sharing photographs, Instagram is frequently used today to make sales, promote or conduct awareness campaigns. After Instagram became more popular in many fields, shared posts were used in some evaluations with respect to health as well. Accordingly, posts, photographs and messages shared by adolescents with type-1 diabetes were examined by Yi-Frazier et al. (2015, p.1372-1382). Al-Eisa et al. (2016), on the other hand, observed that Instagram posts on home friendly exercises deliver appropriate physical activity to individuals and are preferable and efficient in terms of sustainability. Tiggemann & Zaccardo (2015, pp.61-67) also stated that Instagram posts about fitness levels of people may cause some unwanted results in the physical appearance of those who are exposed to such images.

As engagement of users' images on Instagram gradually increased, health institutions began to enhance their presences on Instagram as well. The number of hospitals in Turkey with existing Instagram accounts is on the rise. An examination of the posts shared by a hospital in America, on the other hand, reveals that they regularly focus on health information, care, success stories from the hospital and inspiring patient stories. An appropriate example for a health campaign, conducted on

Instagram, is a hospital in America's Seattle city, where the collaboration between a hospital and sports team ensured 2 million USD worth of donations, while each step of the project was shared on Instagram

(<https://www.instagram.com/p/BnIIV1pgRY4/>).

2.2.4.5. LinkedIn

LinkedIn is an application for social communication purposes in the business world, founded in December 2002 by Reid Hoffman. LinkedIn is often used as a social network by businesspeople to find new connections, have access to business opportunities and share and follow career changes (Özkaşıkçı, 2012, p.12). Even though LinkedIn is not used as commonly as Facebook, which is another social network, it is still quite popular among businesspeople.

Widely preferred in professional lives, LinkedIn, as a social network, provides users opportunities to be in contact with other stakeholders, present job offers and follow current business topics (Del Giudice, Della Peruta & Carayannis, 2014).

Anthenius et al. (2013, p.430) evaluate the use of social media in the Netherlands with respect to matters of health. Accordingly, patients first and foremost use Twitter and Facebook to get into contact with other patients, who have had similar issues as theirs, whereas health professionals often use LinkedIn and Twitter to get into contact with other health professionals or to promote themselves. Another finding of the same study indicates that patients use social media in health communication more intensively than health professionals.,

According to Görkemli's review on social media use in Turkish health communication, on the other hand, physicians usually use social media to communicate with their colleagues, similar to the findings of Anthenius et al.

Moreover, their content includes providing information and motivation. However, the most popular online platforms for physicians are Google and YouTube, video content site, whereas Anthenius concluded that the most popular online platforms for physicians are LinkedIn and Twitter (Görkemli, 2017, p.135).

2.2.4.6. Blog

Blogs are web sites that allow content generators to write about their opinions on various topics. Blog writers are referred to as ‘bloggers’. The word blog, was derived from ‘weblog’; it is a shorter version of the original in a sense (Yamamoto & Şekeroğlu, 2014, p.24).

Çevikel summarizes the general characteristics of blogs as follows:

- They consist of entries, not pages.
- They are simple and practical to use.
- Entries are listed in a chronological order from newest to oldest.
- They are updated frequently.
- They include personal opinions of individuals.
- They allow interaction.
- It is important to include external links in blogs (Çevikel, 2010, pp.83-87)

Blogs can also be classified as per their purposes of use and their content. Blogs are classified by Bacon as those with themes; with individual content; for corporate purposes and sponsored ones (Bacon, 2005 cited in Kılıç, Özlem & Onat, 2007, pp.906-907).

Physicians, hospitals and even patients, who want to share their experiences with a disease, use blogs. As the increasing use of blogs by physicians, patients started to follow these blogs more. From this perspective, it is believed that physicians' blogs are preferred over a pharmaceutical company's blog in the society. This drives pharmaceutical companies to get into contact with health bloggers (Kayabali, 2011, pp.17-20).

Today's health campaigns on social media often utilize blogger content too. For example, 'The Heart Truth' campaign is a social media campaign on health, where various social media accounts were used. The purpose of this campaign was to raise awareness for heart diseases, which are becoming more prevalent in women and leading to death, to specify individual evaluations and when necessary, see a physician. As the campaign was formed, individual attitudinal models were predicted and a red dress was selected as the symbol to draw attention that this disease is not only a risk factor for men, but is also frequently observed in women. Initially, 66 popular blogs in 2010 were selected for the campaign to announce it. In addition, a Twitter account was launched and gatherings for bloggers and women to get together were organized. During these meetings, Twitter use was intensive and many tweets about the topics were posted (Taubenheim, 2012, pp.205-220).

Over time, bloggers' communication with pharmaceutical companies led this phenomenon to be questioned as to whether or not it was genuine and organic. It may pose a public health problem for pharmaceutical companies to merely direct people to a product for advertising purposes with insensible product use.

2.2.4.7. Wikis

Wikis offer the feature of free documentation and are designed in a way that would allow users to create and arrange pages and connect them. Wikis work with a system, where members can add documents with proper references, and later can revise them. Wikis ensure that information is stored under certain headlines (Doğan, Duman & Seferoğlu, 2011, p.3).

Consequent to the changes in the field of communication on a global scale, the communication between a physician and a patient can be carried out via the internet; medical information is now available. Patients can get into contact with their physicians via social networks. Furthermore, a patient can relay their experiences to another user, which became determinant in treatment – hospital – physician preferences. Various websites such as Patients Likeme, ACOR.org and others help users to communicate with physicians and acquire information about health. Online social media are used as platforms users prefer to freely talk about their ideas and experience, in addition to information exchange. Additionally, physicians now become brands over social media, regardless of their institutions of employment, and promote themselves separately too, which caused physicians to surpass health institutions. Wikis in the field of health can be illustrated with pages such as Medpedia.com, AskDrWiki.com. Patients can find myriad information about a number of diseases from such websites and can even consult with specialists (Kayabalı, 2011, p.17).

2.3. Crisis Communication

This study investigates the use of social media in health communication and specifically during crises. To that end, this section explains the concept of crisis, crisis communication and crisis communication in health services.

2.3.1. Definition of crisis

Crises generate negative effects within the organizations or communities, in which they occur, as well as on individuals and organizations' authorities, bringing along communication barriers too. The lack of correct information and the collection of accurate and immediate information may give way for crises to snowball (Tutar, 200, p.17). The dictionary definition of a crisis also means decadence and collapse. A crisis, then, can be defined as the challenging period, depression or dismay in the course of life of a society, organization or person (TDK, 2002).

Korkmazyürek and Basım (2009, p.12) argue two types of crises; one caused by individuals and one caused by natural causes. According to Parsons, on the other hand, there are three types of crises (Parsons, 1996, pp.26-27):

1. Immediate crises: These crises occur instantly and they do not yield any indicators beforehand.

2. Emerging crises: These crises occur over time; they are not noticed beforehand.

3. Sustained crises: These crises continue for a long time, once they start.

Events that occur all of a sudden disrupt the existing order in a society and cause certain changes in them. Organizations and communities may have to face sudden changes and their management may be negatively affected, if they are not

prepared for such crises. The preparation is linked with the signals of a crisis, immediately before it occurs. Despite the common perception that crises occur all of a sudden, many crises have prior signs, except for natural disasters. Organizations and institutions that follow such signs will be less affected as they go through moments of crises (Tağraf & Arslan, 2003, p.151).

2.3.2. Characteristics of crisis

Certain characteristics within the definition of crisis actually point to the very characteristics of a crisis itself. The general characteristics that differentiate crises from other problematic instances are listed below:

- a) A crisis refers to situations that instantly occur and its symptoms are not noticed before it occurs.
- b) Attempting to solve crises with a standardized problem solving policy is not the right thing to do. Actions must be taken quickly to respond to crises.
- c) Certain outcomes and changes due to the crisis may damage the integrity of organizations and institutions and may even affect their survival (Yeniçeri, 1993, p.218).

Crises directly and indirectly affect groups linked with the organization. Identifying the effects of organizations in the emergence of crises is quite important to properly respond to the crisis. For instance, both the organization and linked groups are affected by a global outbreak, but the organization is not directly responsible from the emergence of such a crisis. At this stage, the main purpose of the organization must be to relay the correct information and help the linked groups as required, in order to overcome this process with the least potential damage. On the other hand, crises that arise consequent to organizational mistakes require other tasks such as

apologizing and compensating beyond the mere disclosure of the mistakes to the linked groups (Gülgün, 2011, p.7).

A crisis can emerge at any given time, which is why every organization must be aware of this potential and be prepared for possible crises. The skills of managers may not be noticed throughout daily routines, but their competence becomes more visible in times of risk and crisis. The way to overcome a crisis is, first and foremost, to be aware of the crisis, develop specific plans and managerial processes against it and manage the crisis with the appropriate communications. Crisis management is a significant step for organizations and those who manage these periods well and overcome them ensure their persistence (Demirtaş, 2000, p.355).

Characteristics of a crisis that can affect an organization and damage it by threatening its survival are listed as below (Fronz, 2011, p.29 cited in Aydın, 2020, p.1205):

- A crisis emerges suddenly and requires action immediately. Times of crisis are quite intense.
- A crisis has a beginning and an end.
- A crisis is a whole of complex events.
- It is important to take action rapidly during the time of crisis; consequences can change in parallel with the decisions made.
- A crisis affects all parts of the organization and stakeholders must possess all the information concerning the crisis.
- A crisis changes the organization permanently.

- A crisis also brings along risks. Financial and non-financial assets become subject to risks during times of crises.

2.3.3. Definition of crisis communication

Crisis communication is the type of communication that is carried out in order to determine the appropriate methods to tell the departments, which would be affected by the crisis, about the event, at the right time and in the right way by using fast and honest expressions, explicate potential outcomes and receive the minimum damage from the crisis as such (Reynolds & Seegers, 2005, pp.43-55).

The concept of crisis communication is a widely debated new topic. For a long time, the requirement of communication in the time of a crisis and communication being a subcategory at this point were not accepted and even overlooked by crisis researchers. Crisis communication has later gained importance for the first time during the Chernobyl event. The government's failure to disseminate accurate information after the disaster at Chernobyl and the negative processes that followed revealed how important crisis communication is at such times (König, 1991, pp.38-39).

Various process management and communication plans in line with the distinctions of the crisis in question are required throughout crisis communications. Therefore, the correct classification regarding crisis carries importance (Caponigro, 2000 cited in Özpınar & Aydın, 2020, p.243). Crisis communication processes are assessed in seven stages:

1. Identifying the vulnerabilities of the organization at the time of crisis,
2. Clarifying the decisions to be made to prevent the crisis,

3. Establishing crisis scenarios and taking measures,
4. Initiating the appropriate communication process to overcome the crisis,
5. Managing crisis communication in a correct, clear and understandable way,
6. Identifying values to be measured at the time of and after the crisis,

following these steps, monitoring the community during this process and evaluating them,

7. Minimizing the effects of the crisis on the organization's position and reputation.

Effective communication at the time of the crisis is key to overcome potential issues during this time both quickly and conveniently. The organization must prepare beforehand crisis scenarios in a clear way and identify potential vulnerabilities. Accurate and clear communication must be chosen during the crisis, as well as the appropriate one to overcome the situation. Moreover, certain scales must be used to monitor and evaluate all stages before, during and after the crisis.

2.3.4. Crisis Communication Theories

Crises may have internal and external causes. Internal causes that lead to crises can be exemplified with the disruption of the organization's dynamics, making erroneous decisions or the lack of growth balance. Some examples of the external factors, on the other hand, are the pandemic, natural disasters or economic, political and legal factors (Kazancı, 2014, p.20). Regardless of the source of the crisis, being prepared beforehand ensures the convenient way to overcome the crisis process. Therefore, organizations must be prepared for a crisis before it occurs, identify the effects of the crisis on corporate and social structures, plan well the process of crisis

management and communication and make sure that these plans are applicable at the time of the crisis. Even the communication channels and messages to be used during the crisis to communicate with the affected stakeholders must be planned in advance. In this context, the main theories that are developed to examine the appropriate communication plans during a crisis, are Corporate Apologia Theory, Image Restoration Theory, Situational Crisis Communication Theory (Coombs & Holladay, 2002, pp.165-187; Eğinli, 2014, pp.34-39; Çakır, 2014, pp.71).

2.3.4.1. Corporate Apologia Theory

Organizations and institutions set up certain plans before they are faced with a crisis and the apology may be observed in such processes. This strategy has to be included in the corporate culture and action plan. Apology and defense strategies have the same roots, but the defense strategy is more comprehensive than the former (Solmaz, 2006, p.151). On the other hand, apologies are frequently used parts of crisis action plans (Hearit, 2006, p.4). Various studies argue that apologies in crisis processes yield positive outcomes, while recent studies observe that apologizing is effective in limited crisis periods. Researchers highlight the advantages of apologies in crisis responses (Coombs & Holladay, 2008, p.253; Myers, 2016, p.177).

Researchers point to certain crisis action plans that are frequently used. According to Travers (1998), there are eight response categories in crisis managements, established in line with the attitudes of organizations during crises. They are listed as below (Travers, 1998, p.154):

1. **Denial:** Rejecting the existence or the probability of the crisis.
2. **Lack of recognition:** Accepting the crisis, but not placing sufficient importance on it.

3. **Stabilization:** Indicating the display of a stable process management plan in crisis process management.
4. **Extraordinariness:** Expressing that all processes are manageable.
5. **Formation of an ideal process:** Coming up with the idea of a best management practice for the crisis management process by a certain organization or person.
6. **Generation of a rationale:** Ensuring the acceptance of the most rational method during crisis management.
7. **Projection:** Illustrating that the crisis is related to external factors.
8. **Fragmentation:** Lack of focusing on the whole by fragmenting the crisis into pieces.

2.3.4.2. Image Restoration Theory

Based on the type and style of communication organizations adopt in the face of a crisis, this strategy has to do with the perceived image of the organization after the crisis by its stakeholders or its target audiences (Eğinli, 2014, p.26; Çakır, 2014, p.85). Besides these strategies, the organization must be constantly monitoring its stakeholders and strive to have a positive image (Çakır, 2014, p.85). Grounded on this theory, the crisis communication that should be planned to preserve the organization's image, is expressed with five main messages (Benoit, 1997, pp.78-182; Blaney et al., 2002, pp.381-382; Benoit & McHale, 2009, p.270).

Table 3. Message Strategies in image restoration theory

Message strategy	Structure
Denial	

Simple denial	The crisis situation is rejected.
Shift the blame to another culprit	The crisis is blamed on a different stakeholder.
Evading responsibility	
Provocation	Normalizing the crisis by stating that the reason lies against provocative actions.
Defeasibility	Shortcomings concerning the reasons leading to the crisis are accepted.
Accidents	The source of the crisis is stated to be an accident.
Good intentions	The reason of the crisis is stated to have begun with good intentions.
Reducing offensiveness	
Bolstering	Support is provided to set forth affirmations or previous examples, despite the predicament caused by the crisis.
Minimization	Crisis-related situations are displayed at a minimum.

Differentiation	Comparison with other organizations that have gone through similar crises is conducted to illustrate that the organization is on the right path.
Transcendence	The action plan of the organization is grounded on justifications.
Attacking accuser	A counter-attack against the attacker that caused the crisis is carried out.
Compensation	Damages arising from the crisis are compensated.
Corrective action	Post-crisis issues are solved and its possible reemergence is prevented.
Mortification	Crisis is accepted and a defense oriented action plan is set up as per the image restoration theory.

Source: Benoit, 1997.

2.3.4.3. Situational Crisis Communication Theory

Selected during the crisis, the strategy affects both the process management of the crisis and the perspective towards the organization. Situational crisis communication theory examines the effects of the selected crisis strategy on the crisis per se and the organization (Coombs, 2004, p.267). Grounded on attribution theory, situational crisis management theory acts as a guide to select the appropriate strategy for the crisis. It is essential, according to this theory, that the strategy to be adopted during the crisis is appropriate with the structure and perception of the organization,

so that they can be preserved. To that end, examples in accordance with crisis scenarios are accepted to be present (Coombs & Holladay, 2004, p.97).

Coombs & Holladay (2002, pp.170-172) classify crises as below, in line with the level of responsibility of the crises:

Crises with minimal responsibility: natural disasters, external attacks to the organization and so on.

Crises with low responsibility: accidents, technical issues and so on.

Preventable crisis: crimes, humane errors and so on.

Dealing with the designation of crisis management strategies to be selected during crises and the effect of said strategies on perceived image of the organization, the situational crisis communication theory also reveals the steps as to how the reputation of the organization in times of crisis can be protected and how the organization is perceived to manage the crisis, in addition to strategies to protect reputation. From this perspective, events that are not framed or perceived sufficiently or wrong expressions, selected during the crisis, can cause these strategies to fail (Duđan, 2020, pp.127-159).

Coombs (2014, pp.175-177) gathers the main strategies developed against crises under four categories. They are listed below.

- 1. Denial:** Lack of recognizing the crisis, blaming other stakeholders.
- 2. Diminishing effects:** Rendering the crisis less visible, decreasing its effects.
- 3. Rebuilding:** Accepting and apologizing.
- 4. Bolstering:** Supportive behavior during the crisis. Reminding and praising.

According to situational crisis communication theory, the media to convey the messages, prepared as per the selected strategy, are just as important as the strategy selection itself. As communication channels varied from past until today, channels that are selected during crisis stages changed as well. With the recent rise of social media, crisis communication gained new ground. Crisis communication established via social media influences the crisis process of the organization and the processes of the crisis concerning its spread and solution, as a result of its characteristics (Aydin, 2020, p.1202-1230).

Thanks to the use of social media in crisis communication, information is shared rapidly, while suitable grounds are prepared for fast coordination and correct planning, in which crises are possible to be overcome with the collaboration among all stakeholders. On the other hand, organizations' active and correct use of social media during the crisis allows them to generate the right perception for them and receive the likes of their target groups (Wang, 2016, p.57).

Coombs & Holladay (2006, p.125) underline that organizations must be prepared for crises at any given moment and the positive awareness they create before crisis is very important with respect to the perspective of their target groups during and after the crisis. The positive perception organizations generate on a regular basis can protect them against negative ones during times of crisis, while the focus on such negativities may remain at low levels. From this perspective, periods before crises are quite significant to protect the organization's reputation and to overcome the crisis with the minimum damage possible (Van der Meer & Verhoeven, 2014, pp.526-527). Moreover, communicating clearly and transparently in crisis management, delivering correct information to stakeholders, remaining calm and not panicking, accepting the mistakes that gave way to crises or were made during it and apologizing for them and

sharing the planned strategies during and after the crisis via right channels are quite important for the reputation management endeavors of organizations (Alsop, 2004, p.25).

2.3.5. Crisis Communication in Health Services

Services in the health sector widely vary and the production and consumption of the service occurs almost simultaneously. In addition, the information flow between the producer and receiver of the service is complex and variable. Therefore, the health sector is at a high risk for crises. Services in the health sector rapidly influence human lives and erroneous decisions or low service quality cannot always be made up for; thus, health sector is by definition quite vulnerable in terms of potential crises (Tatar & Türkmen, 2014, p.81).

Health sector often has to be prepared for the crisis its services may face and minimize such risks. However, preparations may not suffice in crises that arise due to external or environmental factors. For example, a pandemic or a biological or nuclear attack are examples of crises that are difficult to be predicted and solved. Individuals in the health sector must evaluate crises as individual, corporate and systemic crises and find solutions for each one of them separately. Crises with individual effects must have the individual and their close ones at the center, while a crisis on a corporate level must be evaluated with respect to the organization's services, reputation and affected stakeholders. On the other hand, if the crisis represents a problem regarding the system, individual, corporate and even public steps may have to be taken (Bulduklu & Karaçor, 2017, pp.279-296)

It is quite challenging to evaluate all crises that may occur in the health sector and collect them under headings. Still, pandemics, epidemics, accidents, malpractice

cases and many other service-related mistakes are examples for the crises classified in the health sector (Panos et al., 2009, p.106).

One of the most important principles to follow after a crisis occurred in the health service sector is the steps of correct crisis communication. The first and foremost foundation in crisis communication for health services with respect to both the health institution and health professionals is to provide accurate and honest statements at each step of the crisis and to develop forms of communication according to ethical guidelines. Ethically planned and honest crisis communication endeavors prove to be effective communication methods to find solutions in the face of crises (Bulduklu, 2015, pp.219-220).

2.3.6. Crisis Communication in Social Media

Social media is a frequently preferred part of communication due to the ease of access to information on both global and local levels, low budgets and two-way communication. Considered from the point of view of supporting crisis communication, social media can be seen as an opportunity; still, attention must be paid in this scope (Kalaycı, 2017, p.337).

Organizations must monitor their evaluations in social media and internet use on corporate levels and prevent small-scale crises that may occur on such platforms with rapid actions (Ward, 2011, p.2).

Social media is beginning to be used more commonly today and it has become a part of everyday life. With Facebook in the lead, many social media such as Instagram, Twitter and YouTube are actively used by numerous individuals across the world. From this perspective, service providers and organizations must be on the lookout for this changing world of communication and exist in these media.

Jensen (2014, p.7) highlights that individuals follow information on social media in times of crises, see social media as a reliable source and it is of utmost importance for organizations to use social media during crises, since information rapidly flows there, in terms of delivering the right information. Still, social media monitoring is a challenging path and ungrounded information flow concerning institutions and organizations may be observed at any given time. As soon as such a situation is noticed, organizations must take immediate action and relay the correct information and the truth to their publics.

On the other hand, there are limited studies, which evaluate the impact of social media in crisis management. Thus, the effects of social media use at the moment of a crisis are still unknown. Today, the increasing use of the internet and fast communication that followed cause crises in virtual settings to grow. In this context, organizations must include social media management to their current crisis processes in today's world. Social media is not only effective for internet-based crises, but also in the management of crises in the traditional sense. At this point, the right and efficient use of social media by organizations may carry great importance for the sake of effective communication during a crisis (Ward, 2011, pp.2-3).

3. RESEARCH

3.1. The scope of the research

Health is the most fundamental right of each individual, which is earned as of the moment of birth and cannot be transferred. Individuals' gain of accurate health information and practices accordingly can only be ensured via efficient and correct health communication. Much like the frequently uttered colloquial saying, 'health first', the state of being healthy surpasses all types of different conditions and emotions. In this context, individuals and societies must gain knowledge and practice it to preserve their states of being healthy.

While individuals used to gain health information in the past with traditional methods; i.e. by directly contacting health personnel or other people, advancing technology today helps them in this process with mass media and social media channels. Social media represents a communication instrument that can be freely used by individuals of all ages and access large groups of people. On the other hand, social media is not only the preferred communication means of individuals – it is also widely preferred by organizations and institutions.

Myriad health organizations and institutions today use different media to inform individuals about health, correct misinformation, generate right health behavior and manage health crises in the face of many risks, the number and conditions of which increase and change every day, which is why they conduct communication endeavors. Especially with the widespread use of the internet recently, the digital age began and many organizations and institutions started to carry out their communication activities on social media platforms.

The rapid dissemination of information on social media and the possibility of bilateral communication brings social media to a significant point for organizations and institutions that involve individuals and social media to their crisis management processes. On the other hand, misinformation and disinformation are among the negative influences of social media on the crisis process, for they are also delivered to users rapidly via these information channels. During this process, institutions undertake the important duty of delivering accurate and reliable information to the society. In this sense, official social media accounts of health authorities are among significant resources. Much like the case in other crisis situations, health crises also require organizations to accept and recognize the crisis, relay accurate and reliable information from appropriate sources to stakeholders, be transparent and present crisis solution ways within the scope of the crisis management process to facilitate it. From this perspective, Covid-19 pandemic is a health crisis that must be examined.

The Novel Type Coronavirus (SARS-CoV-2) was first observed in the city of Wuhan in China in December 2019. Easily contracted from person to person via droplets, the disease quickly spread throughout the globe with America and Europe in the lead and caused huge numbers in death tolls. The first case in Turkey was confirmed on March 11th, 2020, and Covid-19 was declared a pandemic outbreak on March 12th, 2020, by the World Health Organization. Symptoms of the disease are determined to be fever, malaise, fatigue, weakness, shortness of breath and coughing. Thus, the effects of wearing masks in public, putting a distance with other persons and cleanliness were highlighted as preventative measures to stop the spread of this disease.

Along with Covid-19 pandemic, various health institutions and organizations across the world started to use different communication channels to disseminate

messages of information about the disease and those about awareness raising, designating the behavior required to protect oneself from the disease for individuals and other organizations to see. During this process, both traditional media channels and new media channels such as social media were included in the process. Since social media is able to spread information quickly and can reach a large number of people quickly, it has become one of the widely used communication channels.

Turkish Ministry of Health, since the beginning of the pandemic, has conducted health communication via various channels, one of which is social media. In this context, this study examines the health communication process the Ministry of Health of Turkey, which is the main health authority of the country, conducted with respect to the purposes, frequency of use and the pandemic itself.

3.2. Research questions

This research study examines the essentials of the crisis communication conducted by the Turkish Ministry of Health during Covid-19 pandemic over Twitter, which is the selected social media channel. Accordingly, the research questions are as follows:

1. Has the Ministry of Health used Twitter, a social medium, actively as a communication tool during Covid-19 pandemic?
2. Was the use of Twitter by the Ministry of Health effective in crisis management?
3. Was an increase observed in the use of the official Twitter account of the Ministry of Health after the first confirmed Covid-19 case in Turkey?
4. When content of the tweets posted during Covid-19 pandemic are examined, which health communication theories are observed to be used intensively?

5. Which posts received more engagement than others?
6. What kind of message content does the Ministry of Health mostly delivers in the posted tweets?

3.3. Sample of the study

Within the scope of this research study, the official Twitter account, set up and managed the Ministry of Health of the Turkish Republic, @saglikbakanligi, is examined. The first 500 tweets, posted on this account between March 11th, 2020, which is the date of the announcement of the first confirmed coronavirus (COVID-19) case in Turkey, and November 20th, 2020, are analyzed to determine themes, content, relevant theories and engagement rates of the tweets (tweet, likes, retweets).

3.4. Limitations of the study

The research study was conducted between March 11th, 2020 and November 20th, 2020; however, the pandemic was not limited to these dates. Therefore, all tweets regarding the pandemic could not have been analyzed.

The study, examining the content of the messages, posted on Twitter by the Ministry of Health, as its frequently selected medium of message dissemination, excludes from its scope the posts of the institution on other social media accounts and traditional communication channels.

3.5. Methodology

The first part of the study includes a literature review concerning health communication, social media and crisis communications. The second part, on the other hand, also utilizes content analysis method.

Content analysis allows for the presentation of the content in a systematic and objective way, since messages are conveyed within a numerical framework (Altunışık et al., 2010, p.322). It is the research method that comprises the entirety of findings, presented impartially consequent to the processing of textual views acquired with the research. These comments also include the sender of the message, its receiver and the message per se at length (Weber, 1989, p.5).

A total of 500 tweets, posted on the official Twitter account of the Ministry of Health between March 11th, 2020 and November 20th, 2020 are reviewed within the scope of this research study. After the data is collected, theme, content messages, use of sources, which sources are used, if there are any, images in the tweets and engagement rates with likes, comments and retweets were transferred to an Excel spreadsheet, after which the following diagrams were formed.

4. FINDINGS

A total of 500 tweets, posted on the official Twitter account of the Ministry of Health between March 11th, 2020, and November 20th, 2020, are analyzed and interpreted separately. Moreover, the years 2019 and 2020 are assessed with respect to the number of followers and posts.

The official Twitter account of the Ministry of Health was launched on April 17th, 2012 and displayed a stable course of increase in its number of followers until the beginning of Covid-19 pandemic. However, as of March 2020, the number of followers increased up to 178 times more than the previous year before the pandemic (socialblade.com)

Table 4. The increase in the number of followers of the official Twitter account of the Ministry of Health in 2019 and 2020

March 2019	4430
March 2020	791481

The examination of the number of tweets in 2019 and 2020 show a total of 2,160 tweets posted in 2020 and 1,529 tweets posted in 2019, along with retweets. Such increase in the number of tweets can be linked with the pandemic and in this context, the content of the tweets will be further scrutinized.

Table 5. The number of tweets from the official Twitter account of the Ministry of Health in 2019 and 2020 (along with reposts)

Number of tweets in 2019	1529
Number of tweets in 2020	2160

The first confirmed Covid-19 case in Turkey was officially declared on the date of March 11th, 2020. The Ministry of Health posted many tweets from its official Twitter account as of this date regarding the pandemic. Figure 7 shows the thematic analysis of the 500 posts between March 11th, 2020, and November 20th, 2020, which revealed that 321 out of 500 tweets have to do with the pandemic. In addition, 26.7% of the tweets are remembrances for certain days and weeks and relevant celebratory, memorial or awareness raising messages; 6.2% include various health tips and 2.6% have messages about current topics and information, but not related with the pandemic.

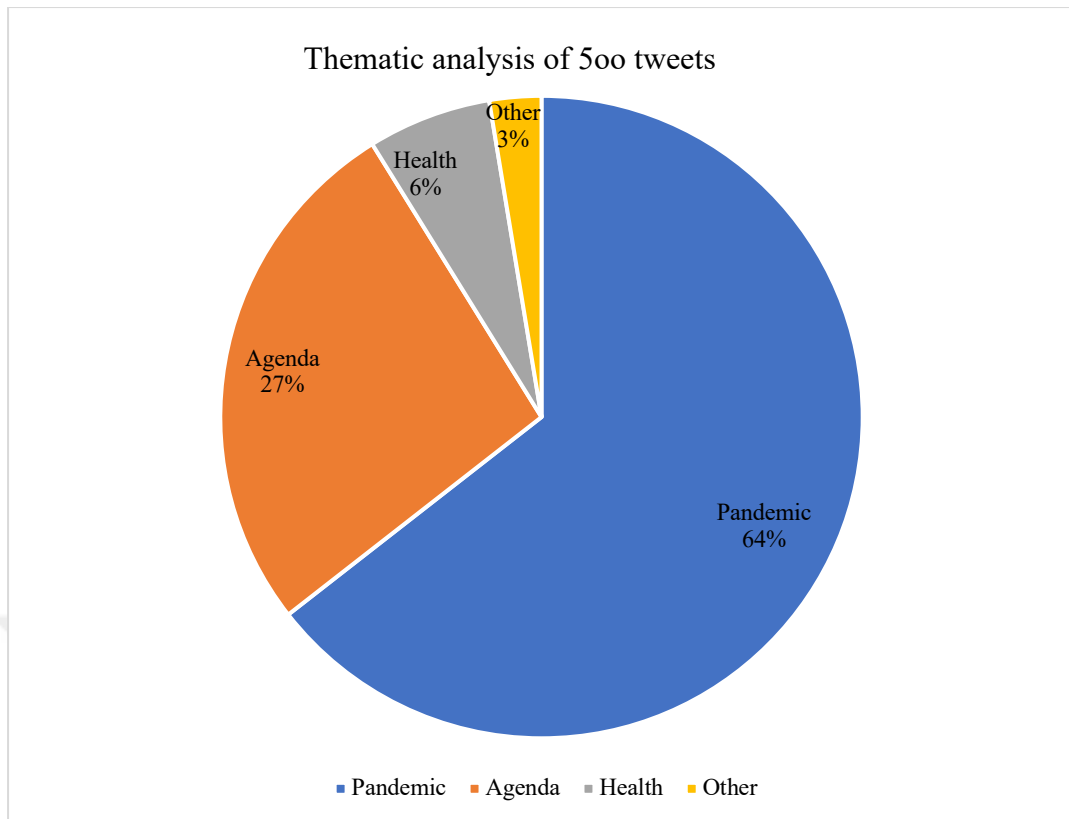


Figure 7. Thematic analysis of 500 tweets posted on the Ministry of Health's official Twitter account between March 11th, 2020 and November 20th, 2020

The content of the tweets was also analyzed. Accordingly, awareness raising messages can be seen heavily in the posts shared on the official Twitter account of the Ministry of Health.

The content analysis of the first 500 tweets as of the beginning of the pandemic, on the other hand, 23.4% have awareness raising purposes in line with the meaning of the day and 21.6% involve tweets with awareness raising themes regarding the pandemic. Other content of tweets includes that of meetings about the pandemic, rules, information, warnings about unofficial posts, conveying of sources and operational information, explanations about the pandemic, information on the passing of a health worker and remembrance or celebration messages as per the meaning of the day. The following diagram shows the distribution of such content.

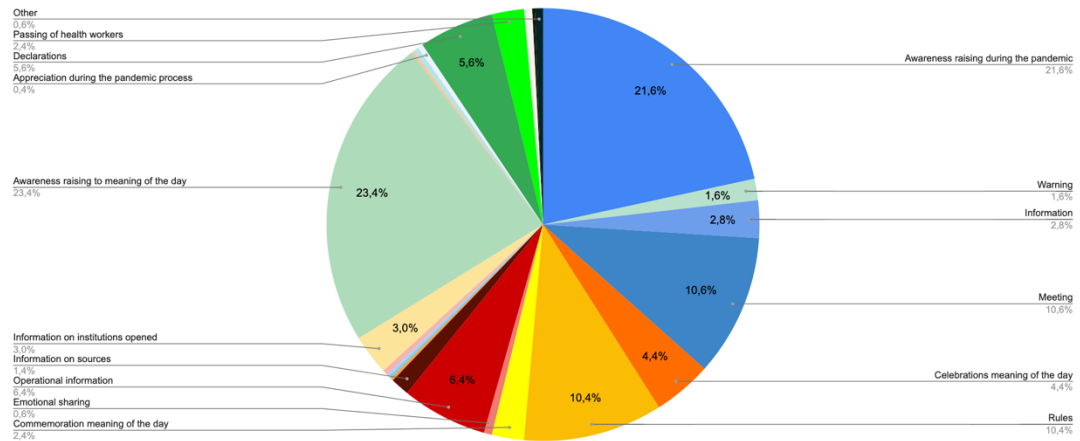


Figure 8. Content analysis of 500 tweets posted on the Ministry of Health’s official Twitter account between March 11th, 2020 and November 20th, 2020

A historical evaluation of the posts with respect to the first and second half of the pandemic, on the other hand, shows that 77% of the first 250 posts until the date of June 16th, 2020, are about the pandemic. The next 250 posts examined later within the scope of this research study reveal that pandemic themes cover 48% of the total of tweets. The following diagram shows the main themes together.

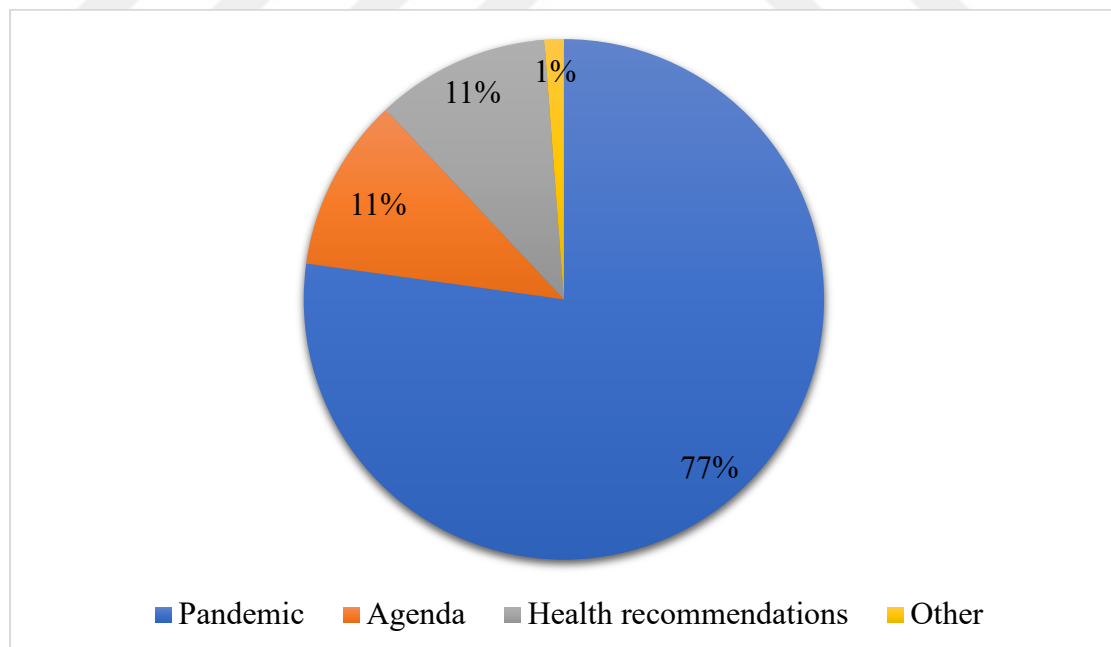


Figure 9. Thematic analysis of the first 250 tweets posted on the Ministry of Health’s official Twitter account

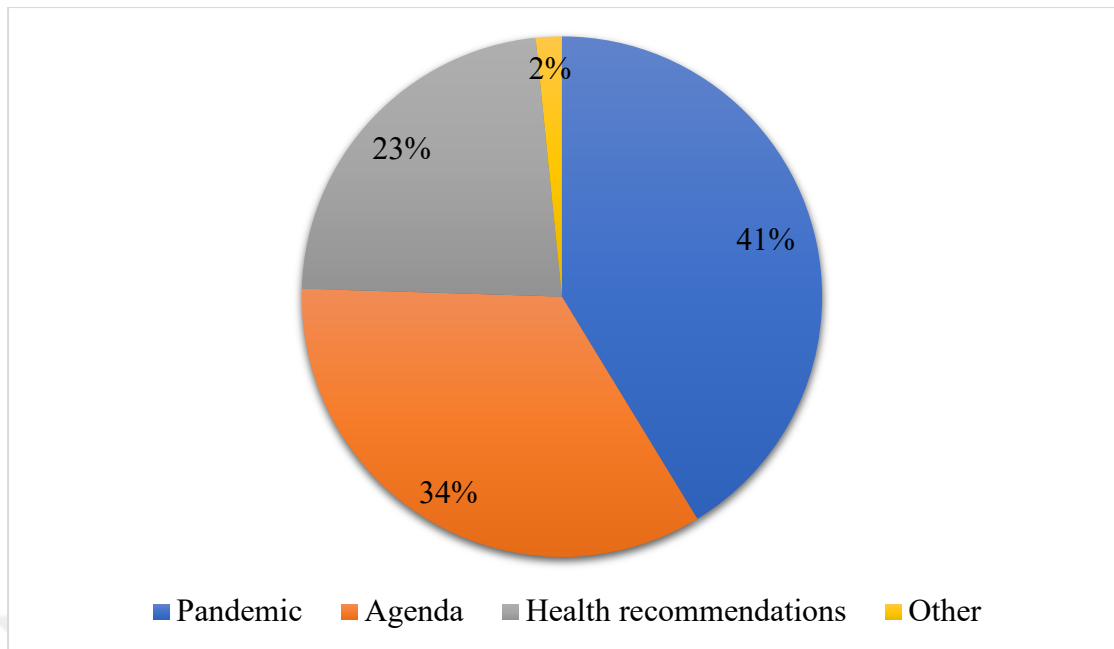


Figure 10. The thematic analysis of the other 250 tweets posted on the Ministry of Health's official Twitter account

As can be seen from the diagrams above, the initial periods of the pandemic witnessed tweets with pandemic-related topics, whereas the rest of the pandemic period was heavily focused on both pandemic-related themes and posts about sharing the agenda. The content of the agenda includes meeting agenda, awareness raising on certain days and weeks and messages of celebration and remembrance.

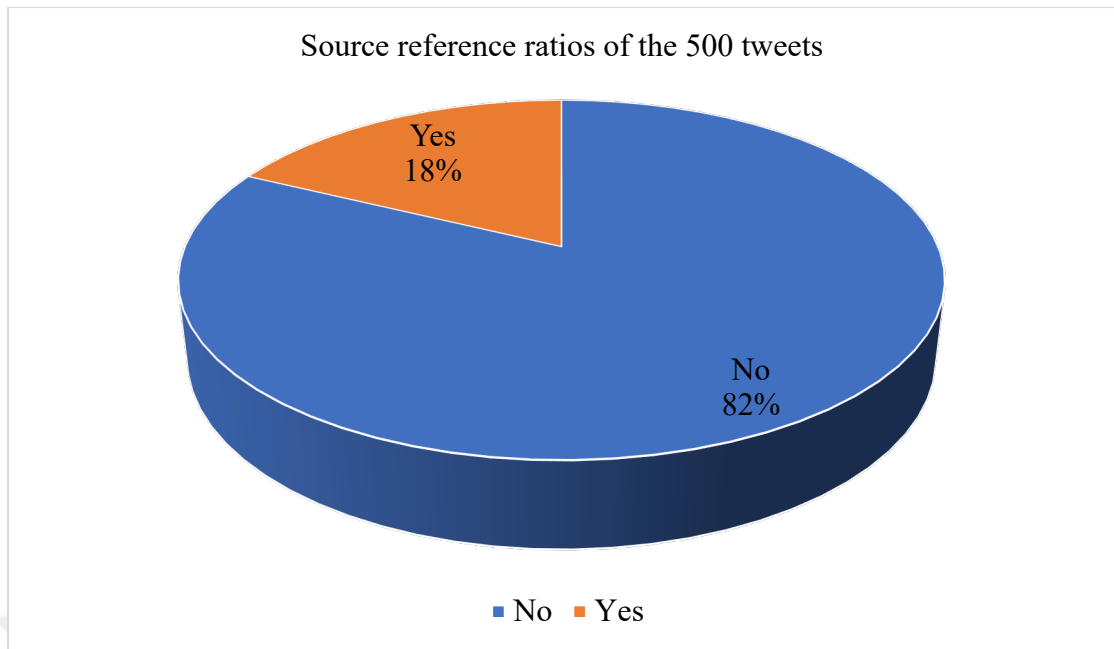


Figure 11. Source reference ratios of the 500 tweets posted on the Ministry of Health's official Twitter account between March 11th, 2020 and November 20th, 2020

The diagram above shows that 82% of the 500 tweets posted from the official Twitter account of the Ministry of Health between March 11th, 2020, and November 20th, 2020, do not contain any source references.

An examination of the sources, on the other hand, reveal that 44.9% of the tweets of the Ministry of Health has saglik.gov.tr as its source and the majority of other source references have saglik.gov.tr extensions in them too. Accordingly, external sources or references are quite limited in numbers and were not observed in posts with scientific data and information. The following diagram shows the analysis of sources, used in the 500 tweets posted from the official Twitter account of the Ministry of Health after the pandemic began.

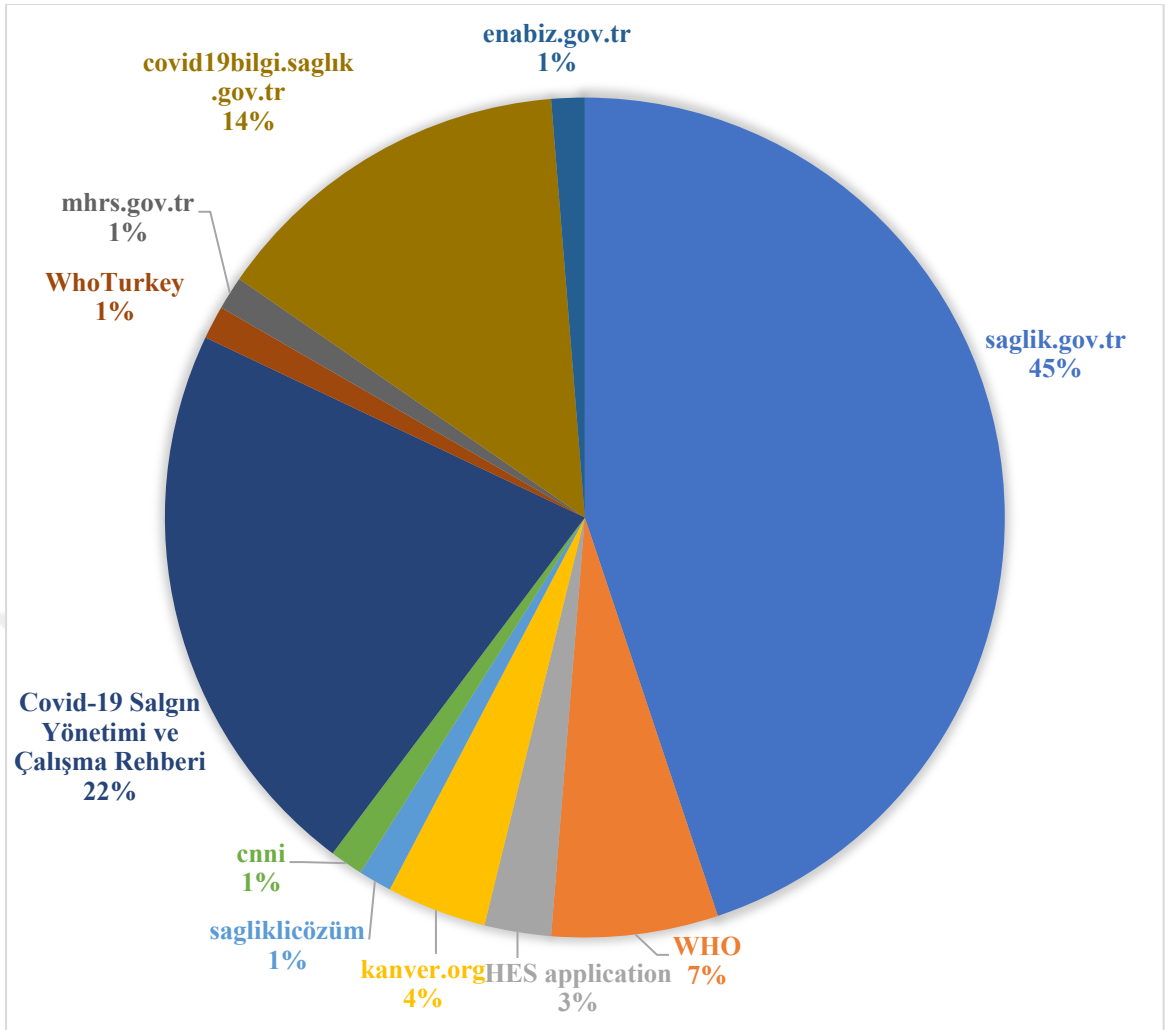


Figure 12. The rate of used sources of the 500 tweets posted on the Ministry of Health's official Twitter account between March 11th, 2020 and November 20th, 2020

According to the observations, approximately 48% of the 500 tweets of the Ministry of Health from its official Twitter account between March 11th, 2020, and November 20th, 2020, include hashtags.

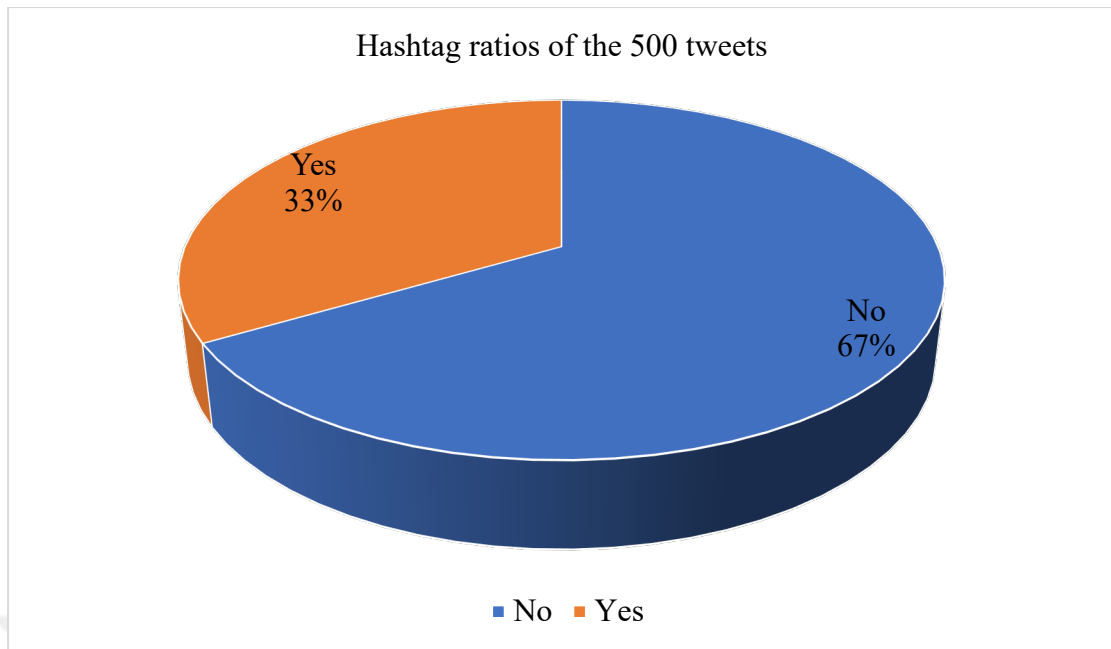


Figure 13. Rate of hashtags used in the 500 tweets posted on the Ministry of Health's official Twitter account between March 11th, 2020 and November 20th, 2020

The most frequently used 5 hashtags are, respectively; #HayatEveSiğar (#LifeFitsHome – repeated 25 times), #SağlıklıRamazan (#HealthyRamadan – repeated 20 times), #SağlıklıBayram (#HealthyEid – repeated 15 times), #SağlıklıTürkiye (#HealthyTurkey – repeated 12 times), #minnettarız (#WeAreGrateful – repeated 12 times). The remaining hashtags are used to remind certain days and provide content about raising awareness on the particular day, such as #DünyaDiyabetGünü (#WorldDiabetesDay), #AnnelerGünü (#MothersDay), #DünyaEmzirmeHaftası (#WorldNursingDay), #AvrupaAntibiyotikFarkındalıkGünü (#EuropeanAntibioticAwarenessDay). The following two diagrams respectively show the rates of the first 5 hashtags and others used in the tweets.

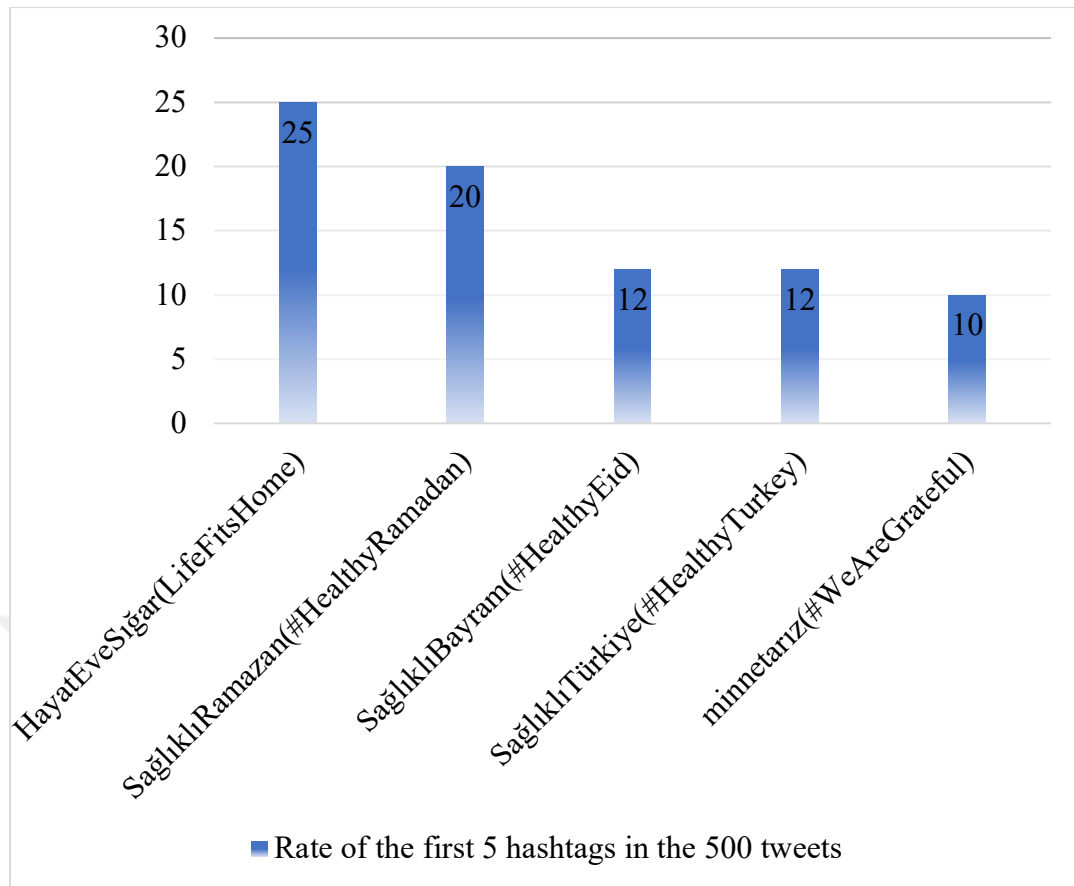


Figure 14. Rate of the first 5 hashtags in the 500 tweets posted on the Ministry of Health's official Twitter account between March 11th, 2020 and November 20th, 2020

The Ministry of Health, in its posted tweets, did not remain limited with merely 280 characters and also utilized various images, videos and news content. The 500 tweets, investigated as of the first tweet posted after the pandemic, shows that nearly 80% included visual content by the institution. The tweets that only have textual content are mostly continuations of its preceding tweets, while tweets with both video and textual content mostly highlight emotional posts.

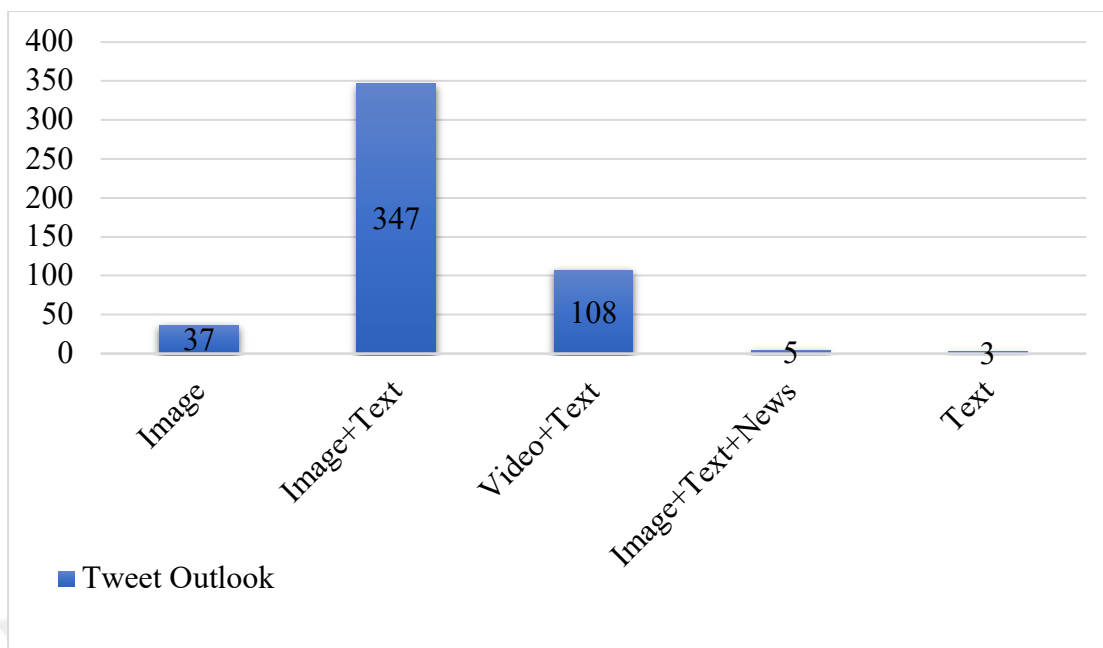


Figure 15. The rate of evaluation of images, videos, texts and news in the 500 tweets posted on the Ministry of Health's official Twitter account between March 11th, 2020 and November 20th, 2020

The 500 posts, shared from the official Twitter account of the Ministry of Health, are also evaluated in 16 categories in accordance with the study conducted by Wang et al. The categories are illustrated in the table below.

Table 6. Sixteen categories determined as per the study of Wang Y. et al.

	Category content	Example
1 st Category	Strategy, guidance, awareness raising	Wear a mask, wash your hands, etc.
2 nd Category	Rules	Travel ban, curfew applications, etc.
3 rd Category	Information on circumstances	Number of cases etc.

4 th Category	Closing	Information on closed institutions
5 th Category	Opening	Information on opened institutions
6 th Category	Operations	Vaccination appointments, HES code etc.
7 th Category	Resources	Vaccination, intensive care unit etc.
8 th Category	Explanation	If you are infected with Covid... etc.
9 th Category	Warning against rumors and fraud	Announcing of fake papers etc.
10 th Category	Donation campaigns	Support for foreign countries etc.
11 th Category	Recruitment information	Information on hiring health workers
12 th Category	Opinions and comments	Sharing emotional moments etc.

13 th Category	Referencing external sources other than scientific information	Sharing articles about Covid
14 th Category	Information on other diseases	Hepatitis, AIDS etc.
15 th Category	Event programs and agenda	Posting about meeting agenda and content
16 th Category	Sharing good examples	Sharing experiences

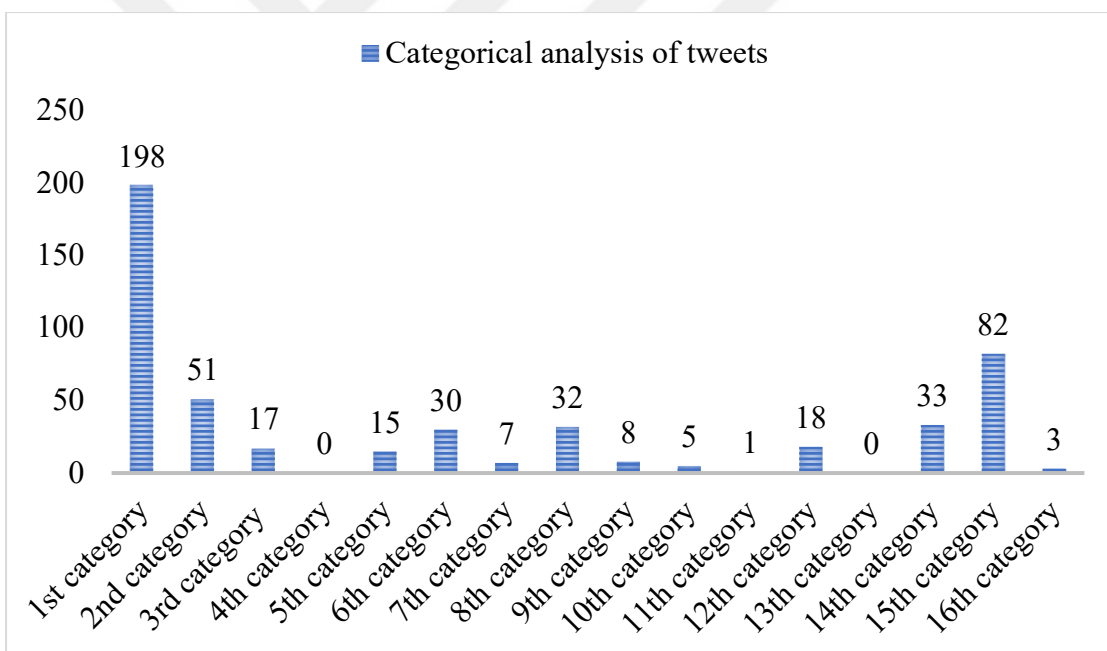


Figure 16. Categorical analysis of the 500 tweets posted on the Ministry of Health's official Twitter account between March 11th, 2020 and November 20th, 2020 according to the study of Wang Y. et al.

According to the evaluation based on the study of Wang Y. et al., the social media use of the Ministry of Health during the beginning of the pandemic reveals 40% in the first category with the purposes of guidance and strategy making. Another observation was the frequent posting about the agenda and the reminders about

Covid-19 pandemic rules. On the other hand, information on closed institutions during the pandemic and external sources with references to scientific data were not included in the tweets.

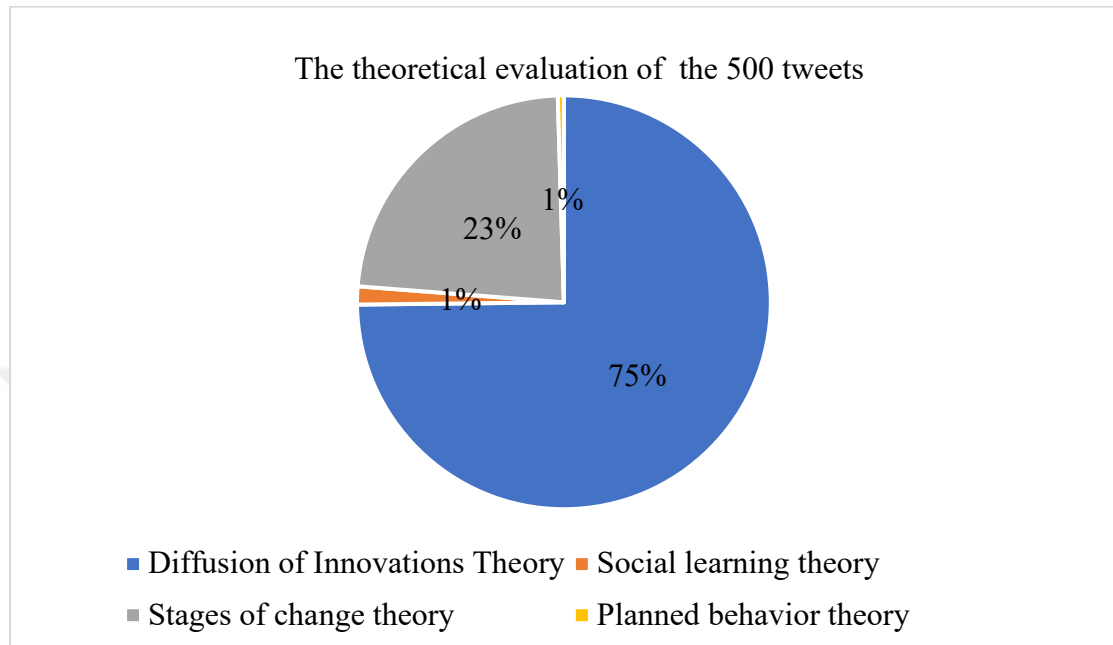


Figure 17. The theoretical evaluation of the 500 tweets posted on the Ministry of Health's official Twitter account between March 11th, 2020 and November 20th, 2020

Organizations use social media account for different reasons. Social media use serves many purposes such as informing, promoting and awareness raising. When the Twitter use of the Ministry of Health between March 11th, 2020, and November 20th, 2020, is examined, it was observed that the majority of the tweets during the pandemic carried the aim of raising awareness in the followers. Another aim was observed as the relay of the correct health behavior against the outbreak to be created amongst the followers as of the beginning of the pandemic. The purpose of tweeting was also evaluated; accordingly, 75% of the tweets have content with awareness raising purposes. This brings to mind the Diffusion of Innovations Theory from amongst health communication theories. Such type of communication, formed to improve a new health behavior by a prominent institution in the society, can actively

be observed in Twitter, which is a social medium as well. Secondly, the posted tweets were observed to have shared information about the stages of creating health behavior. Accordingly, health communication in line with Stages of Change Theory, was preferred with a rate of 23.1%.

Evaluated within the scope of the research study, 324 out of the 500 tweets have to do with the pandemic. When the tweets with only awareness raising and creating new health behavior purposes are examined, 66% were observed to actively choose to use the Diffusion of Innovations Theory. Furthermore, the type of communication in line with the Stages of Change Theory, as per the analysis of the tweets, came second after the Diffusion of Innovations.

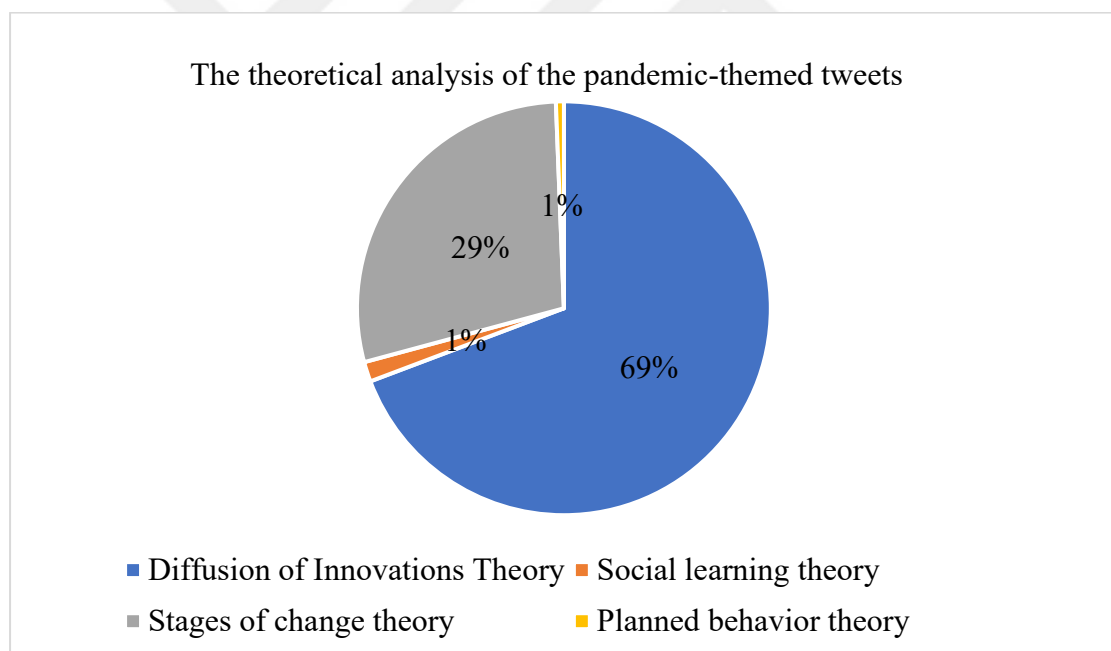


Figure 18. The theoretical analysis of the pandemic-themed tweets posted on the Ministry of Health's official Twitter account between March 11th, 2020 and November 20th, 2020

Social media both ensures the fastest information flow and allows for bilateral communication, considered within all communication sources. Accordingly, it is possible to measure engagement, which the communication on social media channels

attracts, thanks to various methods. Twitter allows users to comment on the posts, like them and retweet them on their personal accounts. From this perspective, the analysis of the 500 tweets, posted after the announcement of the first confirmed Covid-19 case in Turkey, shows that the most liked and commented tweets have utilized emotional appeal (see Figures 20-21-22).



Figure 19. The tweet with the highest number of comments from amongst the 500 tweets posted on the Ministry of Health's official Twitter account between March 11th, 2020 and November 20th, 2020

“The children of our health workers have a message for you!

#WeWillDefeatItTogether.”

<https://twitter.com/saglikbakanligi/status/1250395801295126528>



Figure 20. The most retweeted tweet from amongst the 500 tweets posted on the Ministry of Health's official Twitter account between March 11th, 2020 and November 20th, 2020

“14 Rules Against Coronavirus Risk: Put a distance of at least 3-4 steps between you and the persons with symptoms of common cold.

Coronavirus is not stronger than your preventative measures.”

<https://twitter.com/saglikbakanligi/status/1239787503395225600>



Figure 21. The most liked tweet from amongst the 500 tweets posted on the Ministry of Health's official Twitter account between March 11th, 2020 and November 20th, 2020

<https://twitter.com/saglikbakanligi/status/1240707561130582016>

“We applaud our health employees, who work with nothing but love, patience and sacrifice for our sakes. Thank you Turkey.”

The engagement of the posts, shared on Twitter by the Ministry of Health, was also evaluated within the scope of this study. Accordingly, the highest number of comments was posted on the tweet that showed the children of health workers in a collage video, prepared to motivate and support health workers during the pandemic. The highest number of retweets, on the other hand, belonged to the visual tweet, designating the 14 rules of social life during the pandemic as it was set out in its early periods. The highest number of likes, on the other hand, was for the tweet that motivates and congratulates the health workers, who relentlessly worked with

sacrifice. The three tweets of the Ministry of Health with the highest engagement rates were posted in the beginning of the pandemic.



5. DISCUSSION

Health is one of the most fundamental needs of every individual. Individuals, in order to fulfill this need, learn various attitudes and behavior on health throughout their lives and aim to protect and improve their health as a result of what they have learned. In this scope, individuals communicate about health during their whole lives. This communication is not only limited to interpersonal communication, but also frequently formed between communities, institutions that provide health services and lawmakers.

After the advanced technologies of today, health communication is observed to have differed with respect to potential channels. Health communication was, in the past, limited to interaction between individuals and health workers, a unilateral type of communication at its core; whereas the entrance of internet and social media into the daily lives of individuals made sure that individuals can meet their health-related needs from internet-based channels and institutions can send their informative and awareness raising messages can deliver to individuals thanks to these channels.

Organizations and institutions in the health field often use social media with various purposes such as announcing to individuals the new developments in the organization, raising awareness about current matters of health, improving correct health behavior and conducting awareness raising campaigns to that end, relaying health messages and managing different crises. Covid-19 pandemic was also observed as a time of crisis, during which health institutions preferred using social media channels to manage this crisis.

Covid-19 was first seen in the city of Wuhan in China in 2019 with symptoms such as fever, malaise, fatigue, weakness, coughing and shortness of breath, leading

individuals to be hospitalized and even pass away. The pandemic took its toll on the whole world in a short time. Covid-19, as a disease, quickly spread throughout the world consequent to the globalization, which is why it exceeded being a mere epidemic and affected the globe. Covid-19 pandemic brought a crisis to the doorstep of health authorities, not stemming from the institutions.

The first Covid-19 case was confirmed in Turkey on March 11th, 2020, which was declared via various communication channels by the Turkish Ministry of Health. As of the beginning of the Covid-19 pandemic crisis, Turkish Ministry of Health also started using social media actively as a communication means, similar to many foreign health authorities and institutions. Social media channels such as Twitter, Facebook and Instagram, were used to serve many purposes such as providing information, guiding individuals, relaying rules and warnings.

The official Twitter account of the Ministry of Health was launched on April 17th, 2012, and shared posts about various information, celebration and guidance. As of March 11th, 2020, when the first Covid-19 case in Turkey was confirmed and the pandemic began, the Ministry of Health posted tweets on its official Twitter account about the disease and the pandemic. As a result of the research study, the majority of the tweets were observed to be related to the pandemic with content mostly about raising awareness, guiding the public and promoting health behavior.

The tweets of the Ministry of Health posted after the pandemic mostly contain messages about the pandemic and social media has been actively used during this time of crisis. Evaluated specifically for the pandemic and in general, it was observed that individuals were delivered messages of guidance, information and awareness

raising to promote correct health behavior. Compared to the later periods of the pandemic, its early stages witnessed more posts about the pandemic per se.

The Ministry of Health does not share source references in its tweets regarding the scientific data. When they do show the sources, they refer to their own extensions and use hashtags in line with the meaning and importance of the day. Moreover, the posts with highest numbers of comments, likes and retweets; i.e. engagement rates, have been those that contain emotional appeal.

Evaluated with respect to health communication theories, the posts reveal that Diffusion of Innovations Theory was actively applied on social media, specifically for the pandemic and in general.

The Ministry of Health used social media actively as a communication tool during the pandemic and posted more shares than the previous year. Furthermore, the Ministry of Health did not remain limited with the 280 character limitations of Twitter, mostly supporting the texts and news with visual content.

The Ministry of Health kept the use of sources in its communication over social media quite limited and often referred to its own extensions. In this context, it can be suggested that inclusion of external resources, pointing to the scientific data in the tweets, can strengthen the messages. Moreover, the messages to be delivered must be assessed with regards to health communication theories and appropriate theoretical frameworks must be determined in line with the type of the message.

The evaluation of the crisis communication endeavors of the Ministry of Health via social media between March 11th, 2020 and November 20th, 2020, reveals that the crisis was accepted within the scope of Image Restoration Theory and to that end, reparational actions were taken. The Ministry of Health, during this time,

conveyed its messages of informative and awareness-raising purposes via its official Twitter account, securing mutual, rapid and two-way communication.

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