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COVID-19 as a Metaphor: Understanding COVID-19 Through Social Media Users

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Original Research

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Abstract

Objective: This study, which aims to reveal the metaphorical perceptions of social media users regarding the term, *COVID-19*, is in accordance with the phenomenological method.
Method: The phenomenological method was used in this study. In July 2020, a total of 125 social media users voluntarily participated in this research study and were asked to derive metaphors regarding the concept of COVID-19.
Results: With the participation of social media users, metaphors about COVID-19 were determined. These metaphors, which were provided completely voluntarily in response to social media posts, reveals that the participants approached the COVID-19 phenomenon with a variety of meanings.
Conclusions: When the metaphors derived by the participants are examined through different categories, it can be seen that a variety of metaphors are produced and almost all of them attribute negative meanings to COVID-19. A significant part of the metaphors evoke disasters and unexpected events. The absence of more hopeful metaphors regarding the end of the pandemic, may stem from the fact that this study took place during the middle of the pandemic, when discussions of the "new normal" were being made just after the first wave.

Epidemics are as old as human history. People have faced many disasters since the day they existed, and epidemic diseases are the most important of these. The widespread occurrence of infectious diseases, which can seriously jeopardize public health and threaten significant parts of the world, can lead to very striking scenes such as the death of millions. Known epidemics in human history have come in many forms such as plagues, smallpox, typhus, cholera, anthrax, trachoma, leprosy, syphilis, tuberculosis, yellow fever, influenza, and AIDS. The most commonly known, and perhaps the most severe, is a plague. The word *plague*, in most cases, has become a general term used for all epidemics due to its metaphorical meaning. Although epidemics could be seen not only as a societal disease having many social, economic, and psychological effects but also something that forces individuals to take collective measures (unlike diseases that affect individuals), they are also adorned with a wide variety of metaphors due to their multiplicity of effects.

Today, humanity is struggling globally as it faces another epidemic disease: coronavirus disease 2019 (COVID-19). At the start, it initially appeared in China during the final months of 2019—its occurrence in our country (Turkey) was officially announced in March 2020—and at the time of this writing, it has spread and affected societies across the globe. Although scientific knowledge concerning the COVID-19 virus has increased since the early days of the outbreak, there is still no proven therapeutic medicine. While the epidemic affects the world in multiple waves, there have been no other precautions in addition to social distancing, wearing masks, and stricter cleaning measures to protect individuals, yet uncertainties persist in many areas. The metaphors that have been derived from the COVID-19 pandemic, over which humanity has not yet dominated, have been revealing as a powerful tool for understanding the perceptions and experiences related to the epidemic itself. According to Lakoff and Johnson,[1,2] metaphors help us conceptualize the experiences we have encountered in the intangible, with tangible expressions. They emphasize that an important part of our conceptual system is structured by metaphorical relationships.

Metaphor studies can also be used as a powerful research tool in understanding the personal perceptions of an individual about a phenomenon. COVID-19 metaphors and how individual perceptions and experiences surrounding COVID-19 during the pandemic will be revealed and then discussed in further detail in the Findings section of this study.

Methods

This study, which aims to reveal the metaphorical perceptions of social media users regarding the term *COVID-19* is in accordance with the phenomenological method—in which individual experiences constitute it basis. In this method, the researcher is concerned with the subjective

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experiences of the participant, examining the perceptions and the meanings they attribute to events. Facts can appear in various forms such as events, experiences, perceptions, orientations, concepts, and situations in the world.

The phenomenological method focuses on phenomena that we perceive but do not have a deep or detailed understanding of. In phenomenological studies, it is generally aimed to identify and interpret individual perceptions about a phenomenon.[3,4] Phenomenology is commonly described as the study of phenomena as they manifest in our experience, of the way we perceive and understand phenomena, and of the meaning phenomena have in our subjective experience.[5] Phenomenology can be defined as an approach to research that seeks to describe the essence of a phenomenon by exploring it from the perspective of those who have experienced it.[6] By examining an experience as it is subjectively lived, new meanings and appreciations can be developed to inform, or even re-orient, how we understand that experience.[7]

Metaphors are one way of investigating experiences in research conducted in a phenomenological design. The use of metaphors in qualitative research provides an opportunity to examine phenomena from a unique and creative perspective. Metaphors can be used to provide structure to the data; to understand a familiar process in a new light; to identify situation-specific interventions; and to evoke emotion.

Metaphor studies may have some limitations. Misuse of metaphors may detract from the intended research message. Mixing metaphors, failing to follow through with metaphors, and using metaphors that do not fit the data can misrepresent the data. The choice to use metaphors should not become a self-serving attempt at creativity that supersedes subject and substance. At their best, metaphors illuminate the meanings of experiences; at their worst, metaphors distort or obscure the essences of them.[8] To eliminate the limitations of metaphor studies, the analysis stages should be followed systematically, and all meanings should be explained.

There are several metaphor studies in phenomenological design on various subjects such as education, science, migration, and women's studies[9–13] There are also phenomenological metaphor studies that deal with the perception of COVID-19.[14,15]

Collecting Data

Since the COVID-19 pandemic began, it has been heavily on the agenda on social media. With the call made on Twitter, Facebook, and Instagram, the participants voluntarily derived metaphors about COVID-19. The social media accounts used are those that make active posts during the pandemic process. The data collected in the phenomenological method are aimed at understanding the perspectives and experiences of the participants. It has been tried to understand the perspectives of volunteer participants in the pandemic agenda in social media with metaphors.

In July 2020, a total of 125 social media users voluntarily participated in this research study and were asked to complete the statement, "COVID-19 is like __ because __," to interpret metaphors regarding the concept of COVID-19. In studies where metaphors are used as a research tool, the concept of "like" is used to more clearly evoke the connection between the subject of the metaphor and the source of the metaphor. Participants were asked to provide a rationale or a logical basis for their own metaphors by including the concept of "because."[16] The answers to the COVID-19 metaphor that were posted by the social media users on Facebook, Instagram, and Twitter were used as the main data source in this research.

Data Analysis

The metaphors developed by the participants were analyzed in these stages[16]: (a) coding and extraction stage, (b) compilation stage, (c) category development stage, and (d) validity and reliability stage.

Coding and Extraction

At this stage, first of all, a tentative list has been made in alphabetical order for the metaphors produced by the participants. In accordance with this purpose, it was checked whether the participants clearly expressed a certain metaphor in their sentences. At this stage, the metaphor produced by each participant is coded (for example, "disaster," "octopus," etc.). At this stage, studies that did not contain any metaphors were removed. Some participants have shared his/her thoughts on COVID-19, instead of a metaphor. Although some participants expressed a certain metaphor image, no justification (or logical basis) for the metaphor was explained. Due to all these reasons, 64 data collections were eliminated and excluded from the scope of the research.

Compilation

After the extraction of sentences containing weak metaphor images, a total of 83 valid metaphor expressions were obtained. Next, raw data representing each metaphor are reviewed a second time, and "example metaphor expression" was chosen from the expressions.

Thus, an "example metaphor list" was created. This list has been compiled for 2 main purposes: (a) a reference for collecting metaphors under a certain category and (b) describe the data analysis process and interpretations of this research make valid.

Category Development

At this stage, metaphors are examined in terms of the common features they have about COVID-19. In this process, how each metaphor was conceptualized was examined based on the "example metaphor list." For this purpose, each metaphor is analyzed for these points (a) the subject of the metaphor, (b) the source of the metaphor, and (c) the relationship between the subject of the metaphor and its source. Then each metaphor associated with a theme and 8 different conceptual categories (eg, "disaster," "animal," etc.) created.

Validity and Reliability

Validity and reliability are the 2 most important criteria used to ensure the thrustworthiness of research results. "The explanation of data collected and reporting detailed how the researcher reached is 1 of the important criteria of validity in a qualitative research."[3] In this study, 2 important steps are taken to ensure the validity of the research results carried out: (a) data analysis process (how to reached the 8 themes) is explained in detail; and (b) findings on frequently repeated metaphor expressions for each of the 83 metaphors obtained located in the results section.

To ensure the reliability of the research, expert opinion was received to verify into which conceptual category the metaphors fall. For this, the expert was given 2 lists: (a) a list of 83 metaphors and (b) a list of 8 conceptual categories. The expert was asked to match the metaphors with the 8 themes using the lists. Then, the matches made by the expert were compared with the researcher's categories. In comparisons, the numbers of "agreement" and "disagreement" were determined. The reliability formula is (Reliability = agreement/agreement + disagreement × 100), according to Miles and Huberman (1994: 64). In qualitative studies, the desired

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Table 1. Metaphors and Associated Themes

Theme	Metaphor	f	Theme	Metaphor	f
Illness	Herpes	1	**Object**	Brain	1
	Cancer	4		Undesirable thing	1
	Sars	1		Knife	1
	Panic attack	1		Shutter	1
	Diabetes	1		Horror film	1
	Plague	3		Unwanted hair	1
	Disease	3		Second hand car	1
Animal	Mosquito	2		Gum	3
	Tick	1		Litmus paper	1
	Leech	1		Intelligence test	1
	Lice	2		Filth	2
	Octopus	1		Mask	1
	Horse	1		Slow-motion video	1
Disaster	Curse	2		Mushrooms	1
	Natural disaster	1		The seeker in the game Hide and Seek	1
	Rain	2	**Intangible concept**	Gossip	4
	Storm	1		Cunning	1
	Traffic accident	2		Slander	1
	Fetö	1		Ignorance	1
	Terror	1		Pain caused by friends	1
	Serial killer	2		Hatred	2
	Christ	1		Nightmare	1
	Swamp	1		Dirty politics	1
	God's Punishment	1		Responsibility	1
	Apocalypse	2		Inability	1
	Zombie	1		Agnostic thoughts	1
	Invisible enemy	1		The theory of relativity	1
	Nature's warning	1		Meal from a stranger	1
Human relationship	Unwanted relative	12		Turning point	1
	Mother-in-law	1		New system	1
	Sister-in-law/"elti"	1		Schrödinger's cat	1
	Love	8		Stone of Sisyphus	1
	Ex-partner	4		Poetry of Orhan Veli	1
	Woman	1	**Character**	Thanos	1
Action	Self-improvement	1		Leyla	1
	To live	1		Tourist Ömer	1
	Chinese torture	1		Marco Polo	1
	Drowning slowly in a glass of water	1		JÖH	1
	Create balance	1		Teacher Malign	1
	Scoring in the final minute of a cup match	1			
	Establishing civilization	1			
	Martial law	1			
	Setting an agenda	1			
	Study for TUS	1			

level of consistency between expert and researcher is 90% and above. The reliability is 95% in this study.

Results

With the participation of 125 social media users, 83 valid metaphors about COVID-19 were determined. These metaphors, which were provided completely voluntarily in response to social media posts, reveals that the participants approached the COVID-19 phenomenon with a variety of meanings. The most frequent metaphors included an unwanted relative (12), love (8), an ex-partner (4), gossip (4), and cancer (4). Other metaphors that were repeated 2 or 3 times include the plague, disease, mosquito, lice, curse, rain, traffic accident, serial killer, apocalypse, hatred, chewing gum, and filth.

The metaphors constructed by the social media users were examined in terms of their common features and were then grouped into 8 different conceptual categories. These categories are *illness, animal, unexpected circumstance, human relationship, object, intangible concept, action,* and *character* (Table 1). The

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Table 2. Metaphors Associated with the Conceptual Categories of "Illness" and "Animal"

"Illness" Metaphors	f	Participant expressions that justify the reason for producing the metaphor	"Animal" Metaphors	f	Participant expressions that justify the reason for producing the metaphor
Herpes	1	"it gets sick again when the immunity is weakened"	**Mosquito**	2	"can come from anywhere anytime" "it may be anywhere, it may never sting you, but God knows what happens"
Cancer	4	"makes everyone feel fear of death and wear a mask" "even if you want, you cannot get rid of it" "creep"	**Tick**	1	"doesn't make sick everyone who had been bitten."
Sars	1	"from the Coronavirus family and originated in China"	**Leech**	1	"if it sticks, it won't leave"
Panic attack	1	"cause death anxiety"	**Lice**	2	"easy to be infected" "you can't get rid of it easily"
Diabetes	1	"it will rise if you don't act cautiously"	**Octopus**	1	"it sticks and does not leave"
Plague	3	"kills" "affects humanity" "caused an epidemic"	**Horse**	1	"if you hold the halter firmly in your hand, you will reach the goal you want (preventions: mask, distance) but if you let go he'll run as he pleases"
Disease	3	"everyone will get sick" "it disrupts our psychology" "when infected, important organs can be sick and lead to death"			

derived metaphors are presented in the tables below under each conceptual category. Provided in each table are the name of the metaphors, the frequency of each, and the expressions that were used to justify the reason for creating the metaphor (these expressions are presented as direct quotations).

COVID-19 as an "illness"

The social media users who derived metaphors in this category have conceptualized COVID-19 through the concept of "illness," which was in line with their experiences and perceptions of the disease, which began impacting the world at the start of 2020. It can be expected that people use more familiar contexts to understand unknown or unfamiliar situations (Table 2).

Participants most frequently used the cancer metaphor in this category. The prevalence of cancer in recent years has increased throughout society and is a disease whose diagnosis and treatment process frightens individuals; it was the most frequently derived metaphor as a result of the fear of death and the difficulty of treatment processes. There was a tie for the second most frequently derived metaphor: disease and plague. Due to the perception that everyone will experience disease, that disease in 1 organ can affect other organs, and that disease can produce negative psychological effects is the reason for the high frequency of this metaphor. The plague metaphor also had a high frequency, possibly because plagues have affected human history and have been identified with COVID-19 in terms of their fatality, social effects, and epidemic characteristics. Herpes has been compared with COVID-19, due to the general understanding that a herpes outbreak is triggered when the resistance of the body decreases and then makes a person sick. The severe acute respiratory syndrome (SARS) virus has been compared with COVID-19 because it causes severe acute respiratory failure, is a part of the coronavirus family, and also began in China.

COVID-19 as an "Animal"

Social media users have conceptualized COVID-19 through the concept of "animal." COVID-19 has been associated with the characteristics of certain animals that can spread diseases to humans (Table 2).

The most frequently used metaphors in this category are mosquitoes and lice. The mosquito metaphor has been identified with the characteristics of being able to come from anywhere and bite at any time; that it might not bite the person, although it could be anywhere; and that if it does bite, the result is uncertain. It is known that some individuals who caught the COVID-19 disease did not know how and in which environment they were infected; they also stated that no suspicious situations were noticed when the virus was transmitted. It has been demonstrated that sometimes there are individuals who do not become infected with the virus even though they know that they have come into contact with it; the disease also progresses differently in each individual. Lice are a type of parasitic insect that disturbs individuals; lice are transmitted from 1 person to another and often settle in the hair. In crowded environments, such as schools or barracks, lice can easily be passed between people. Lice has been compared with COVID-19 due to its easy infestation and difficulty in removing. Another metaphor used was the tick metaphor, which is an insect that does not make every animal it bites sick, but can cause CCHF (Crimean Congo Haemorrhagic Fever). In this regard, this metaphor emphasizes how a person can be positive for COVID-19 yet not become sick.

COVID-19 as a "Disaster"

In this category, social media users who derived metaphors have conceptualized COVID-19—which affects every area of life suddenly and unexpectedly—with a "disaster." This category includes metaphors that are about sudden and unexpected situations that may also cause fear and anxiety. Looking at the category in general, unexpected natural events, situations of divine beliefs, and metaphors of enemies and terror stand out (Table 3).

The most frequently used metaphors in this category are curse, natural disaster, rain, traffic accident, serial killer, and apocalypse. The curse metaphor is a concept that takes place in different beliefs throughout human history. The curse, which means to punish people or societies, was compared with COVID-19 because it is a disease that society cannot rid itself of. Similarly, for the metaphor of

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Table 3. Metaphors Associated with the Conceptual Categories of "Disaster" and "Human Relationship"

"Disaster" Metaphors	f	Participant expressions that justify the reason for producing the metaphor	"Human Relationship" Metaphors	f	Participant expressions that justify the reason for producing the metaphor
Curse	2	"it won't leave us behind" "it is not going away"	**Unwanted relative**	12	"its absence is better but stubbornly there" "looking for opportunity to come"
Natural disaster	1	"when and where it will come from is not known so we have to be cautious all the time"	**Mother-in-law**	1	"it will eat you up, you either die or victory is yours"
Rain	2	"can be infectious through droplets" "one day we will all be caught"	**Sister-in-law/ "elti"**	1	"make people hurt each other"
Storm	1	"destroying the world"	**Love**	8	"it does not give people any comfort" "it hurts" "either kills or crawls" "is not infectious if you don't hug"
Traffic accident	2	"even if we pay attention, it will happen to us if the other person does not pay attention" "it can happen to us suddenly"	**Ex-partner**	4	"nothing will be the same after it leaves" "it is not clear when it will come" "can turn your life upside down at any moment" "even if he doesn't mess with you, chances are you go to him"
FETÖ	1	"sneaking into you"	**Woman**	1	"even if it doesn't kill you, it makes you crawl"
Terror	1	"treacherously approaches"			
Serial killer	2	"leaves a mark with every contact" "killed our innocent doctors"			
Christ	1	"is the last warning to humanity"			
Swamp	1	"unscathed"			
God's Punishment	1	"it is the counterpart of the sins of the people"			
Apocalypse	2	"you stay with yourself, nobody can benefit" "it's the reason for avoiding loved ones"			
Zombie	1	"caused many deaths"			
Invisible enemy	1	"you don't know where and how harm will come, and you fear it"			
Nature's warnings	1	"Nature distracts or destroys or aligns"			

God's punishment, it was emphasized that negative situations, for example, illness, happen to humanity because of their sins. With the Christ metaphor, it was stated that the epidemic is God's warning to humanity. Throughout the COVID-19 pandemic, people of different religions and beliefs all over the world have prayed individually or collectively and have begged their god to eliminate this trouble.

Another religious metaphor is that of the apocalypse. Since the beginning of the COVID-19 outbreak, various disasters have occurred in the world and on occasion thoughts about an approaching doomsday have been shared. The belief that everyone will remain alone and separate from their loved ones on Judgment Day echoes the required distance that must be kept from family and loved ones not only at the beginning of the COVID-19 outbreak but also during the disease—both in terms of protecting others and protecting oneself from the virus. The current situation (sick people isolated at home or in the hospital during their treatment and who must live alone through this process) has been compared with the apocalypse. For the rain metaphor, one of the participants used the term "acid rain" as a metaphor. For the traffic accident metaphor, it was stated that COVID-19 can happen to anyone suddenly like a traffic accident, and even if personal precautions are taken, it is sometimes not enough due to the carelessness of others. Metaphors such as natural disasters and hurricanes have been compared with COVID-19 because they affect the entire world and usually appear suddenly. It has been accepted that these types of situations that have happened to humanity due to damage to the environment will either bring order or destroy humanity. The metaphor of swamp, another natural phenomenon, has been derived from the fact that disease is difficult to eliminate. In another metaphor group, the metaphors of terror, Fetö, serial killer, and an invisible enemy have been derived. COVID-19 is insidious and hazardous and where or when it will attack is unknown, similar to the metaphors of the terror. For the serial killer metaphor, it was emphasized that the virus left a trace wherever it made contact and took the lives of doctors struggling during the pandemic at the beginning of their duties. The fact that COVID-19 caused the death of a large number of people around the world has been compared with zombies because these characters try to kill people by reappearing after death.

COVID-19 as a "Human Relationship"

Social media users who derived metaphors in this category have conceptualized COVID-19 in terms of a "human relationship." Metaphors about emotional relationships and relatives are included under this conceptual category (Table 3).

The most frequently used metaphor in this category is the metaphor of an unwanted relative. With this metaphor, the participants emphasized relatives who had come to them out of necessity or force even though they did not want to establish any communication or connection. The reason why this metaphor is derived so often could be due to the presence of doctors and medical students among the participants. Sometimes, in their social media posts,

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Table 4. Metaphors Associated with the Conceptual Categories of "Object" and "Intangible Concept"

"Object" Metaphors	f	Participant expressions that justify the reason for producing the metaphor	"Intangible Concept" Metaphors	f	Participant expressions that justify the reason for producing the metaphor
Brain	1	"almost everyone has it, but not everyone has it activated yet"	**Gossip**	4	"spreads very quickly" "less is more, never limited to one person, becomes 10 from 1"
Undesirable thing	1	"stinky smells always find a way to your nose" "if you hold on to it, you cannot get rid of it, it multiplies"	**Cunning**	1	"shoots a person's ego who thinks themselves more clever than everyone"
Knife	1	"if you don't drop it, it will cut deeper"	**Slander**	1	"somehow imprisons the unrelated"
Shutter	1	"has closed the shops since it came"	**Ignorance**	1	"infects the ignorant"
Horror film	1	"we watch with fear and forget"	**Pain caused by friends**	1	"even if it is resolved, it leaves a mark"
Unwanted hair	1	"when you say there is no more, it stands out somewhere"	**Hatred**	2	"spreads with contact" "it hurts when it starts"
Second hand car	1	"is increasing [price] instead of decreasing"	**Nightmare**	1	"the end is not clear"
Gum	3	"it grew longer and longer doesn't go away when it sticks"	**Dirty politics**	1	"it doesn't end somehow"
Litmus paper	1	"allows to recognize people who value others with an apparatus (mask)"	**Responsibility**	1	"gave people the habit of cleaning"
Intelligence test	1	"shows how much individuals think of themselves and others"	**Inability**	1	"can't resist distances and masks"
Filth	2	"anyone who gets close gets infected" "does not go away when infected"	**Agnostic thoughts**	1	"you don't know who has it"
Mask	1	"either overwhelmed or punished"	**The theory of relativity**	1	"an hour with fear and anxiety passes ten times slower"
Slow-motion video	1	"time feels longer than normal"	**Meal from a stranger**	1	"it is not clear when it would come"
Mushrooms	1	"reproduces as it reproduces"	**Turning point**	1	"I met Fahrenheit 98.6 and started a healthy life"
The seeker in the game Hide and Seek	1	"if you don't hide well, you could be caught at any moment"	**New system**	1	"frees people's pockets at the state level"
			Schrödinger's cat	1	"you don't know what's inside the box"
			Stone of Sisyphus	1	"come down and out"
			Poetry of Orhan Veli	1	"you cannot literally forget or remember"

doctors and medical students stated that they were sometimes subjected to inappropriate and insistent questions and treatment requests from their own acquaintances or relatives, which they were not able to share due to their profession. Other metaphors derived from relative relationships are mother-in-law and sister-in-law metaphors. It has been stated that a mother-in-law can be challenging for the wife of her son, more specifically, there is a power struggle that is known in society as the bride–mother-in-law conflict. For COVID-19, the analogy of either losing or winning a fight has been made. The second most frequently used metaphor in the overall study (and in this category) is the metaphor of love and is used in the same sense as the woman metaphor. The painfulness of love as an emotion when in a relationship, the difficulties while experiencing love, and the need for interpersonal contact have all been identified with the characteristics of COVID-19. The ex-partner metaphor has been compared with COVID-19 due to the fact that ex-partners continue to affect the life of a person after a relationship has finished, that 1 will never be the same after a relationship has ended. As the COVID-19 pandemic progresses, it is argued that we will not be able to return to our old life and habits, that we will live in this "new normal," and that nothing can be the same as before.

COVID-19 as an "Object"

Social media users who derived metaphors in this category have conceptualized COVID-19 through a tangible "object." COVID-19 has been compared with an array of tangible objects due to certain aspects (Table 4).

Participants most frequently used the metaphors of chewing gum and filth in this category. The fact that the chewing gum sticks and stretches longer is why it has been compared with COVID-19 (which effects both diseased individuals and society as a whole) and how it has endured a long time and has not ended. Similarly, the mushroom metaphor describes how the spread of COVID-19 is constantly increasing. The filth metaphor emphasizes the contagiousness of COVID-19 and the need to stay away from others. With the brain metaphor, it has been stated that everyone is a carrier of the disease but it might not be activated. With the metaphor of an undesirable thing, it was described that the disease can unwantedly occur and multiply if no action is taken. The knife metaphor emphasizes that to eliminate the disease and cleanse ourselves because the damage will be greater if we do not take action. The mask metaphor likened staying at home or staying at a distance to the wearing of a mask to avoid illness and identified the punishment of not wearing a mask with becoming ill.

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Table 5. Metaphors Associated with the Conceptual Categories of "Action" and "Character"

"Action" Metaphors	f	Participant expressions that justify the reason for producing the metaphor	"Character" Metaphors	f	Participant expressions that justify the reason for producing the metaphor
Self-improvement	1	"learns and develops in every different environment it finds"	**Thanos**	1	"it is not clear who will be killed"
To live	1	"you will see the effect as you live"	**Leyla**	1	"Mecnun searches for her without a mask"
Chinese torture	1	"locked us home and negatively affects our psychology"	**Tourist Ömer**	1	"he is traveling the world in spite of his tiny stature"
Drowning slowly in a glass of water	1	"even if everyone is close they are still far"	**Marco Polo**	1	"traveling the world"
Create balance	1	"necessary to maintain natural life"	**JÖH**	1	"you never know where it will appear"
Scoring in the final minute of a cup match	1	"always creates overtime at the end of the match"	**Teacher Malign**	1	"although people know about the existence of the teacher, they do not prepare well for the exam, assuming that the teacher will not be able to speak to them"
Establishing civilization	1	"taught people health rules to obey"			
Martial law	1	"we can't solve anything without the restrictions"			
Setting an agenda	1	"manages perception, perceived differently in children, adolescents, adults, and the elderly"			
Study for TUS	1	"teaches you sit down and focus on what needs to be done at home"			

Unlike the others, the shutter metaphor highlighted the economic damages caused by the pandemic. COVID-19 has also been likened to a horror film. It was explained that most people are worried about society but they tend to forget the disease in their daily lives. With the slow-motion video metaphor, it was emphasized that, when the disease is constantly considered and proper measures are taken into account in everyday life, the flow of life is slower.

COVID-19 as an "Intangible Concept"

Social media users who derived metaphors in this category have conceptualized COVID-19 as an "intangible concept." COVID-19 has been identified to a variety of intangible concepts (Table 4).

The metaphor of gossip was identified due to its ability to spread very quickly. It is known that COVID-19 has been increasing exponentially, which is a feature of how epidemics occurs. The metaphor of hatred has been compared with COVID-19 in terms of spreading through contact as well as harming the person from the start. The metaphor of slander refers to the feeling of imprisonment by those who are not sick during the pandemic to protect them and prevent the pandemic from growing. The theory of relativity metaphor describes the situation in which COVID-19 causes fear and anxiety; accordingly, the elapse of time is perceived as passing slower than it actually does. Responsibility, inability, and turning point metaphors perceive COVID-19 positively, unlike the others. Concerning the turning point metaphor, the participant stated that he had started a new exercise and nutrition program in his personal life and had acquired new habits of investing in himself and for making a healthy life. The Schrödinger's cat metaphor refers to the uncertainty of the result of the relevant experiment, which describes the uncertainty of the disease and pandemic process. The metaphor of the stone of Sisyphus is depicted in mythological narratives where Sisyphus pushes a large boulder to the top of a mountain, but despite his struggle, he must perform this action over and over; similarly, the success of COVID-19 could be reversed in which case it might be necessary to start over again. Finally, COVID-19 has been compared with poems, "you cannot literally forget or remember." It was pointed out that poems cannot be remembered completely, even if they are not forgotten, and that it is not possible to constantly remember and completely forget the pandemic that we are currently experiencing.

COVID-19 as an "Action"

Social media users who derived metaphors in this category have conceptualized COVID-19 as an "action." The metaphors related to "action" are within this conceptual category (Table 5).

The metaphor of self-improvement states that the COVID-19 virus, which causes the disease, enters the body of an individual and beings to infect other people which maintains its vitality; it is even able to mutate. It has been pointed out that the virus negatively affects the psychology of people similar to that of Chinese torture; furthermore, just as not everyone around the sick person is necessarily beneficial, similarities were drawn to slowly drowning in a glass of water. Throughout the duration of COVID-19, it has been seen that individuals are experiencing loneliness, whether they are sick or not. In the metaphor of martial law, it was stated that daily life cannot be continued without some restrictions and measures during the pandemic, just like under martial law. With the metaphor of setting an agenda, it was pointed out that the disease and the pandemic were perceived and experienced differently for each age group and all had different agendas.

During the pandemic, school and the educational life of children have been a hot topic on the agenda: because children and young people have the possibility of being carriers of the virus which would continue its spread, curfews have been imposed for a certain period of time and education is carried out remotely. One participant argued that COVID-19 teaches people rules for maintaining a healthy life, which require good nutrition, exercise, cleaning, and hygiene. Studying TUS (Medical Specialization Examination) is a metaphor derived by a medical graduate. General practitioners in Turkey must be successful in the TUS exam to receive specialty training in the field of medicine. It was

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emphasized that this exam requires intensive study, which sometimes requires a person to neglect their social life. One participant derived the metaphor of creating balance for COVID-19. It could be seen that this process is necessary to maintain the balance of nature. While the pandemic continues globally, discussions have been made about the necessity for a reduction in the human population to regain balance of the natural world, and that this process is a normal function of sustainable life.

COVID-19 as a "Character"

Social media users who derived metaphors in this category have conceptualized COVID-19 by likening it to a "character . . . ." Metaphors about a person, group, or character are included under this conceptual category (Table 5). This conceptual category consists of 6 participants and 6 metaphors.

In this category, the first metaphor in the category is the character Thanos. He is a fictional character that appears in American comics published by Marvel Comics. Thanos thought that problems, such as resource shortages, population growth, and global warming, would pose a major problem for his planet (Titan). To find a solution to this (as Thanos says, "to maintain the balance in the universe"), he aimed to destroy half of all living things.[17] Tourist Ömer is the leading character of many Turkish cinema films. Each movie focuses on the places that he travels to, and in this aspect, the global dimension of the COVID-19 virus is emphasized. Similar to this, it was stated for the Marco Polo metaphor that the virus travels the world. Another character who is compared with COVID-19 is Leyla, in the legend of Leyla and Mecnun, which is a love story. This love story is full of pain and despair for the couple who are in love, with no happy ending. With the metaphor of Leyla, it was emphasized how some people insisted on not wearing masks and acted like they were in search of COVID-19, just as how Mecnun blindly searched for his love. In Turkey, the JÖH is the specially trained operations unit of the Gendarmerie General Command. The person who derived this metaphor is a member of the gendarmerie and he likened COVID-19 to the operational strategies used by the members of his unit that had surprised the other party. The last metaphor is teacher Malign (who are difficult or who give low grades), which was derived by a medical student.

Discussion and Conclusions

When the metaphors derived by the participants are examined through different categories, it can be seen that a variety of metaphors are produced and almost all of them attribute negative meanings to COVID-19. The most frequent metaphors, independent of their categories include an unwanted relative (12), love (8), an ex-partner (4), gossip (4), and cancer (4). Among other common metaphors, those which were repeated 2 or 3 times include plague, disease, mosquito, lice, curse, rain, traffic accident, serial killer, apocalypse, hatred, chewing gum, and filth. A significant part of the metaphors evoke disasters and unexpected events. Looking closer at these metaphors, it seems that all have negative meanings, and although the metaphor of love first appears positive, the expressions that were derived actually related to the negative and disruptive aspects of love.

The metaphors developed emphasized many aspects and features of COVID-19 that people associated with many tangible and intangible concepts and these concepts varied considerably. The vast majority of participants see COVID-19 as an unwanted phenomenon, disrupting the order/flow, and the pandemic revealed how unprepared and desperate people were as individuals and as a society. It was observed that metaphors used by politicians around the globe and those who are frequently seen in the media, such as "struggle" and "war,"[18–22] did not occur in the metaphors derived by the participants. Stanley et al.[23] provides insight into lived experiences of the COVID-19 pandemic in their study. Their metaphor analysis revealed participants' pandemic experiences associated with mental models (ie, grief, disgust, anger, and fear). Theoretical and practical implications of these collective mental models and associated collective emotions related to the unprecedented collective trauma of the COVID-19 pandemic. Similarly, in this study, almost all of the metaphors are seen to be negative. In another study, a total of 7 COVID metaphor categories were obtained: being restricted, restlessness, uncertainty, deadly/dangerous, struggling, faith/destiny, and supernatural.[24] When the emerging metaphors are examined, it is seen that the metaphors of danger and uncertainty are similar. Metaphors such as turning point or nature's warning, where COVID-19 is viewed positively by only a few participants, provides clues about the changes in nature and health measures that people are experiencing during the postpandemic process; however, these metaphors are very limited. The contagiousness of COVID-19 has been included in many of the metaphors; its epidemic features and it being a community disease were also stated. In addition, the individual loneliness experienced by a diseased person was also pointed out. The majority of the metaphors derived from the different categories emphasized uncertainty regarding the pandemic as well as the absence of being able to predict the future or predict the end of the pandemic. The absence of more hopeful metaphors regarding the end of the pandemic, may stem from the fact that this study took place during the middle of the pandemic, when discussions of the "new normal" were being made just after the first wave. As this is being written, vaccines are being developed and tangible steps are being taken to end the pandemic all over the world.

Limitations

To develop a deeper understanding of the COVID-19 pandemic, it is necessary to uncover metaphors at different times in the pandemic process. The data of the research are limited to the data collected in June 2020. Volunteer participants were reached through social media, the use of which increased during the pandemic period. Deriving a metaphor for a subject can only be possible if the participants share it voluntarily and by participating in the process.

Conflicts of interest. No conflicts of interest.

Ethical standards. Informed consent was obtained from the participants. Participation was voluntary.

References

1. **Lakoff G, Johnson M.** *Metaphors we Live By*. University of Chicago Press; 2008.
2. **Lakoff G, Johnson M.** Conceptual metaphor in everyday language. *J Philosophy*. 1980;77(8):453-486.
3. **Yıldırım A, Şimşek H.** *Sosyal bilimlerde nitel araştırma yöntemleri*. Seçkin; 2013.
4. **Creswell JW.** *Qualitative Inquiry & Research Design Choosing Among Five Approaches*. Sage Publications; 2007.
5. **Smith DW.** Phenomenology. Stanford encyclopedia of philosophy. Accessed December 1, 2021. https://plato.stanford.edu/entries/phenomenology/
6. **Teherani A, Martimianakis T, Stenfors-Hayes T, *et al.*** Choosing a qualitative research approach. *J Grad Med Educ*. 2015;7:669-670.

https://doi.org/10.1017/dmp.2022.83 Published online by Cambridge University Press

7. **Manen MV.** *Researching Lived Experience: Human Science for an Action Sensitive Pedagogy*. Routledge Taylor and Francis Group; 1997.
8. **Carpenter J.** Metaphors in qualitative research: shedding light or casting shadows? *Res Nurs Health.* 2008;31(3):274-282. doi: 10.1002/nur.20253
9. **Yilmaz AB.** Distance and face-to-face students' perceptions towards distance education: a comparative metaphorical study. *Turk Online J Distance Educ.* 2019;20(1):191-207.
10. **Eisikovits Z, Buchbinder E.** Talking control: metaphors used by battered women. *Violence Against Women.* 1999;5(8):845-868.
11. **Bedir Erişti SD.** The metaphoric perception of teacher candidates related 'fine arts teacher' concept. *Inonu Univ J Faculty Educ.* 2017;18(1):265-280. doi: 10.17679/inuefd.306631
12. **Ozdemir B.** The common metaphorical perceptions of prospective teachers as to DNA-gene-chromosome concepts. *J Baltic Sci Educ.* 2021;20(3): 471-494. doi: 10.33225/jbse/21.20.471
13. **Ummanel A.** Metaphorical perceptions of preschool, elementary and secondary school children about science and mathematics. *EURASIA J Math Sci Technol Educ.* 2017;13(8):4651-4668. doi: 10.12973/eurasia.2017.00956a
14. **Durgun H, Köktürk Dalcalı B, Bayraktar F.** Mental images of nurses regarding COVID-19: a metaphor study. *J Nurs Manag.* 2022:30(1): 53-619.
15. **Bilgin O, Yeşilyurt E.** Perceptıons of university students about coronavirus: a metaphor analysis study. *Psycho-Educ Res Rev.* 2021;10(1):118-127.
16. **Saban A. Okula İlişkin Metaforlar**. *Kuram ve Uygulamada Eğitim Yönetimi.* 2008;55:459-496.
17. **Wikipedia**. Thanos. Accessed April 16, 2021. https://tr.wikipedia.org/wiki/Thanos
18. **Gillis M.** Ventilators, missiles, doctors, troops . . . the justification of legislative responses to COVID-19 through military metaphors. *Law Humanit.* 2020;14(2):135-159. https://doi.org/10.1080/17521483.2020.1801950
19. **Burnette JL, Hoyt CL, Buttrick N, *et al.*** A. Well-being in the time of COVID-19: do metaphors and mindsets matter? *Int J Psychol.* 2022; 57(1):87-95. doi: 10.1002/ijop.12785
20. **Gui L.** Media framing of fighting COVID-19 in China. *Sociol Health Illn.* 2021;43(4):966-970. doi: 10.1111/1467-9566.13271
21. **Sabucedo JM, Alzatea M, Hur D.** COVID-19 and the metaphor of war (*COVID-19 y la metafora de la guerra*). *Int J Soc Psychol.* 2020;35(3): 618-624. doi: 10.1080/02134748.2020.1783840
22. **Fernández-Pedemonte D, Casillo F, Jorge-Artigau AI.** Communicating COVID-19: metaphors we "survive" by. *Tripodos.* 2020; 47(2):145-159.
23. **Stanley BL, Zanin AC, Avalos BL, *et al.*** Collective emotion during collective trauma: a metaphor analysis of the COVID-19 pandemic. *Qual Health Res.* 2021;31(10):1890-1903. doi: 10.1177/10497323211011589
24. **Gök A, Kara A.** Individuals' conceptions of COVID-19 pandemic through metaphor analysis. *Curr Psychol.* 2021;41(1):449-458. doi: 10.1007/s12144-021-01506-z

https://doi.org/10.1017/dmp.2022.83 Published online by Cambridge University Press