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## University Students' Perception of COVID-19: A Metaphor Analysis

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### ABSTRACT

The purpose of this research is to reveal how university students perceive COVID-19 metaphorically during the pandemic process. The research was carried out with the state university students of the faculty of education in the Marmara region in the 2019-2020 academic year. In order to gather data for the research, an open-ended questionnaire was prepared to find out the views of the university students participating in the study about COVID-19. The students were asked what is comparably associated with Covid-19 in regard to their views. Students were asked to complete the sentences like "COVID-19 is like a ..... Because .....". This research is a phenomenological design study and it is one of the qualitative research methods. While analyzing the data, a data analysis method consisting of five steps was followed: coding and sorting, sample metaphor image compilation stage, category development stage, ensuring validity and reliability stage, and transferring metaphors with quantitative data. The obtained data was first grouped in line with the common features of the metaphors and categories were created. As a result of the research, the produced metaphors by university students gathered into ten groups as "freedom restriction", "spreading/contacting", "cause of death", "uncertainty", "enlightening-stimulating", "infectious and adhesive type", "enemy", "dangerous creature", "dirt-stain" and "COVID-19 being as an exam/test".

**Keywords:** COVID-19, university student, metaphor

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## Introduction

The COVID-19 virus, which first appeared in Wuhan, China in the last months of 2019, caused an epidemic in China, and then the whole world was affected by this pandemic. In this process, all education levels from pre-school education to higher education were negatively affected, and many countries in the world had to stop education partially or completely.

According to UNESCO's data, COVID-19 showed its first negative effects on education by affecting 999,014 students only in China on 17.02.2020. This number was 0.1% of the total number of students in the world. Just two months later, on 18.04.2020, the number of students affected by COVID-19 in 190 countries around the world was 1,576,678,202. This number is equal to 90% of students worldwide. The negative effects of COVID-19 continue. As of 26.09.2020, 850,506,853 students in 52 countries around the world have been affected, this number constitutes 48.6% of the total enrolled students in the world. (<https://en.unesco.org/covid19/educationresponse>). Students affected by COVID-19 had to continue their education with distance education opportunities. In this process, it is important how students are affected both psycho-socially and cognitively regarding their perception of the COVID-19 pandemic, which negatively affects their education lives either (Dönmez and Gürbüz, 2020; Göka, Türkçapar, Sayar, Rashid, Dinç and Çakır, 2020; Yazıcı-Çelebi, 2020). In this study, a metaphor study was conducted on how university students perceive COVID-19.

The origin of the concept of metaphor comes from the word "metaphein", which is the combination of the Greek words "meta" and "pherein" (Levine,2005). Also, it means defining very complex terms such as "conveying the meaning of something" and "transferring of it" (Döş, 2010). According to Saban (2004), metaphors are the most powerful mental images that direct, control, and structure ideas about the formation and functioning of events.

Metaphor, by linking the object or phenomenon we want to understand, to the field of concepts belonging to another area of meaning and enables us to re-conceptualize, to see it from different angles, and enables us to highlight some previously unnoticed situations (Taylor, 1984). Metaphors provide a relationship between two different concepts. The relationship between these two concepts can be provided by the fact that a concept has an aspect that is similar to another concept. Metaphors can occur figuratively, by analogy or comparison. Therefore, through metaphor, a relationship is established between two concepts that are not related to each other. Metaphors strengthen individuals' ability to express themselves and help them understand the world. Concepts perceived as abstract can be explained with a concrete concept in mind through metaphors. Metaphor not only gives us a picture of the truth, but it is also a means of "creating reality or occurring the reality" for community members. Therefore, metaphor reflects the "subconscious" structure of society, individual, or a particular community (Yıldırım and Şimşek, 2008). Metaphors are concepts that make the narration more effective. According to Saban (2009), what makes metaphor powerful as a mental model is that it expresses explicitly or implicitly that one of the two different phenomena is like the other. In this context; the individual establishes a relationship between different concepts or phenomena that are not similar. And individuals tend from one particular way of understanding to another. According to Forceville (2002), there are two basic concepts in a metaphor, one of which is the source and the other one is the target concept. While the source concept is the one in which the common features of the target concept are used to explain it; the target concept is the one determined to be explained.

Metaphor is associated with different terms in different sources and fields of science. The metaphor, which is widely used in social sciences in general; is also used in Sociology and Philosophy analogy, in the field of Literature and Linguistics including a figure of speech, borrowing metaphor, metaphorical speech, and in the field of pedagogy. However, none of these can be able to fully explain metaphorical thinking. Therefore, it is seen that the concept of direct metaphor is always preferred (Zeren and Yapıcı, 2014).

When the literature is examined on the education field, as far as can be reached, there are researches such as; Stofflett, 1996; Hagstrom, Hubbard, Hurtig, Mortola, Ostrow and White, 2000; Peacock, 2001; Veugelers and Vedder, 2003; Parsons, Brown and Worley, 2004; Saban, 2004; 2008; 2009; Shaw, Massengill and Mahlios, 2008; Pishghadam, Torghabeh and Navari, 2009; Özdemir, 2012; Eminoğlu-Küçüktepe and Gürültü, 2014; Karabacak, Kucuk, Korkmaz, 2015; Ateş, 2016; Bilasa and Taşpınar, 2016; Saracaloğlu, Çırakoğlu, Akay, 2016; Tez and Aydıner-Uygun, 2016; Alım, Şahin and Meral, 2018; Takahashi, 2018; Özgenel and Gökçe, 2019; Altındağ Kumaş and Süer, 2020; Koç, 2020; Kuvaç and Nerimanoğlu, 2020; Nakiboğlu and Yıldırım, 2020). However, there is not any study reached directly related to COVID-19 in the field of education. Therefore, this research has been considered worthwhile to be conducted.

The purpose of this research is to examine through the metaphors regarding how the students who continue their university education during the pandemic process perceive COVID-19. With respect to this research; answers to the questions stated below will be examined;

1. Which metaphors do the university students associate with COVID-19?
2. How are the metaphors about COVID-19 expressed by university students categorized?
3. How do university students explain the reasons for the metaphors that they express?

## **Method**

### **Research Model**

This research has aimed at determining students' metaphorical perceptions of the concept of COVID-19 is a qualitative study. In qualitative study, it is aimed to understand different perspectives and reasons, to share the different meanings attributed to concepts, to explore the subjective interpretation and structuring of the life experiences (Berg and Lune, 2015). In another saying; these are studies aimed at determining what a concept or phenomenon means (Merriam, 2013). In this study, phenomenology design, which is one of the frequently used patterns in qualitative methods, was used. Phenomenology is a way to discover the underlying meaning of the participants' experience, revealing the underlying structure, while being aware of the researcher's personal judgments (Merriam, 2013). Phenomenology is a pattern that focuses on the phenomena which are recognized but still lacking in-depth and detailed understanding (Yıldırım and Şimşek, 2008). Phenomenology focuses on making a description of “how people perceive phenomena, how they describe them, how they feel about them, how they judge, how they remember, how they re-interpret, and how they talk to others about it” (Patton, 2014). In accordance with the phenomenological approach, there is no single reality. Reality is based on personal perceptions and may change in-time. What we know differs with regard to the situation, environment, and conditions we are in (Giorgi and Giorgi, 2003).

## Study Group

The study group of the research consists of a total of 230 students who participate as a volunteer, also they were receiving undergraduate education at the education faculty of a state university in the academic year of 2019-2020. However, the data obtained from 27 participants have not been included in the study group because there were missing information in data gathering forms and some of the students did not fill in related parts, and some of them were not invited due to the logical errors expressed in the realities under the developed metaphor. This study was conducted with 203 university students. The demographic information obtained is as in Table 1.

Table 1. Demographic information of participants

| Variables                       |  | f      | %      |
|---------------------------------|--|--------|--------|
| Gender                          | Female   | 157    | 77.34  |
|                                 | Male   | 46     | 22.66  |
|                                 | Total  | 203    | 100.00 |
| Department of Education         | Computer Education and Instructional Technology Teaching | 10     | 4.93   |
|                                 | Science Teaching   | 22     | 10.84  |
|                                 | Mathematics Teaching                                     | 37     | 18.23  |
|                                 | Music- Art Teaching                                      | 13     | 6.40   |
|                                 | Special Education Teaching                               | 15     | 7.39   |
|                                 | Guidance and Psychological Counseling                    | 52     | 25.62  |
|                                 | Social Studies Teaching                                  | 14     | 6.90   |
|                                 | History Teaching   | 25     | 12.32  |
|                                 | Turkish Language Teaching                                | 29     | 14.29  |
|                                 | Total  | 203    | 100.00 |
| Whether the person works or not | Yes  | 15     | 7.39   |
|                                 | No   | 188    | 92.61  |
|                                 | Total  | 203    | 100.00 |
| Financial income                | No   | 62     | 30.54  |
|                                 | 1-1000 TL  | 41     | 20.20  |
|                                 | 1001-2000 TL   | 17     | 8.37   |
|                                 | 2001-3000 TL   | 28     | 13.79  |
|                                 | 3001-4000 TL   | 22     | 10.84  |
|                                 | 4001 TL and over   | 33     | 16.26  |
| Total                           | 203  | 100.00 |        |

When Table 1 is examined, 157 (77.34%) of a total of 203 university students were female and 46 (22.66%) were male students. The departments where the university students participating in the study are respectively Guidance and Psychological Counseling (n=52), Mathematics Teaching (n=37), Turkish Language Teaching (n=29), History Teaching (n=25), Science Teaching (n=22), Special Education Teaching (n=15), Music/Art Teaching (n=13), and Computer Education and Instructional Technology Teaching (n=10). Among the students participating in the study, 15 (7.39%) were working, while 188 (92.61%) were not employed. Also, 62 of the students indicated that (30.54%) they had no income, 41 (20.20%) had an income of 1-1000 TL, 17 (8.37%) had an income of 1001-2000 TL, 28 (13.79%) had an income of 2001-3000 TL, 22 (10.84%) stated that they had an income of 3001-4000 TL and 33 (16.26%) of them had an income of 4001 TL or more.

## **Data Collection Tool**

While developing the data collection tool, Google forms have been benefited from it. Google forms are a survey managing application that comes within the Google Drive Office package includes in Google Documents, Google E-Schemes/Tables, and Google Slides. In the research, a structured form consisting of questions containing personal information and an open-ended question for content analysis has been used as data collection tool. Before preparing this form, previous studies that have been conducted on this research were examined. And the examined researches concerning the content of the subject, to determine the metaphors that the university students have in their minds for COVID-19, each of the students have been asked to complete the statements as “COVID-19 is like ..... Because .....” In the personal information section of the form prepared by the researchers, there are questions related to the gender of the students, the department where they study, whether they work in any job, financial income. For the validity of prepared questions, opinions from three experts have been obtained. One of them is an expert on a field curriculum and instruction, the other one is measurement and evaluation expert and the third one is a Turkish Language and Literature specialist. Their opinions are that the expressions are understandable and it is agreed to keep the “form” the same. The pre-application of the form has been completed by the ten students. In this pre-application it is asked to the students if the given explanation on the metaphor is sufficient or not, the final form has been finalized by making necessary revisions in line concerning the received comments and the received answers for the given questions. While determining the metaphors about COVID-19 in the study, the usage "be like" is preferred because it expresses the connection between the subject of the metaphor and the source of the metaphor more clearly. Also, in this study, the word "because" enabled students to justify the metaphors they used. The obtained data were digitized and presented in tables.

## **Data Analyses**

Content analysis was used in the analysis of the data obtained with the purpose of the research. Content analysis is a technique that allows us to study human behavior and nature in indirect ways. Content analysis is carried out to determine the existence of certain clusters or concepts within a set of texts or texts (Büyüköztürk, Çakmak, Akgün, Karadeniz, Demirel, 2013). The main purpose of content analysis is to reach concepts and relationships that can explain the collected data. In the content analysis respectively, the noted levels have been followed as coding and sorting, sample metaphor image compilation, category development, ensuring validity and reliability, and transferring the data to the computer (Saban, 2008; 2009; Yıldırım and Şimşek, 2008). What has been obtained within the scope of this study regarding these stages has been summarized and continues below as follows.

## **Coding and Extraction Phase**

At this stage, firstly, all the metaphors created by university students regarding the concept of "COVID-19" were examined and the forms of 27 participants, which did not have metaphor features or did not contain any explanation, were sorted out. Then, a temporary list of the metaphors produced by the participants was made in line with the alphabetical order. Besides, valid metaphors and their meaningful explanations were identified, and the codes related to the metaphors were determined by the researchers and listed after transferring them to the computer.

## Sample Metaphor Image Compilation Phase

At this stage, the extracted metaphors were sorted in the computer and examined independently by the researchers, and a total of 110 valid metaphors were obtained. At this phase, these metaphors have been arranged in alphabetical order again, and the raw data has been reviewed for a second time, and one “sample metaphor statement” has been chosen from the participant forms by representing each metaphor. Thus, a “sample metaphor list” was created for each of the 110 metaphors, together with the compilation of participant metaphor images that were supposed to represent its’ best form. Metaphor examples and explanations were included in the findings using the codes given to the participants. The metaphors that university students give metaphorical meanings to the COVID-19 concept have been shown in the Table 2.

Table 2. Metaphors the concept of COVID-19

| <b>Metaphor</b>                 | <b>f</b> | <b>%</b> | <b>Metaphor</b>           | <b>f</b> | <b>%</b> | <b>Metaphor</b>    | <b>f</b> | <b>%</b> | <b>Metaphor</b>                 | <b>f</b> | <b>%</b> |
|---------------------------------|----------|----------|---------------------------|----------|----------|--------------------|----------|----------|---------------------------------|----------|----------|
| ability                         | 1        | 2,44     | dominoes                  | 2        | 4,88     | light bulb         | 1        | 2,44     | snake                           | 4        | 9,76     |
| an old flame                    | 2        | 4,88     | enemy                     | 4        | 9,76     | litmus paper       | 1        | 2,44     | snake venom                     | 1        | 2,44     |
| apocalypse                      | 2        | 4,88     | enemy guard               | 1        | 2,44     | long train journey | 1        | 2,44     | sneaking enemy                  | 5        | 12,20    |
| being absence from home         | 2        | 4,88     | enemy that looks friendly | 1        | 2,44     | lottery ticket     | 1        | 2,44     | sneaky snake                    | 2        | 4,88     |
| bird with broken wing           | 2        | 4,88     | exam                      | 6        | 14,63    | louse beetle       | 1        | 2,44     | spark                           | 4        | 9,76     |
| black colour                    | 1        | 2,44     | expert                    | 1        | 2,44     | love               | 1        | 2,44     | spider                          | 2        | 4,88     |
| black news                      | 1        | 2,44     | feeling                   | 1        | 2,44     | mirror             | 1        | 2,44     | stain                           | 2        | 4,88     |
| black paint                     | 1        | 2,44     | fire                      | 2        | 4,88     | monster            | 5        | 12,20    | sticky bal                      | 1        | 2,44     |
| blackthorn                      | 1        | 2,44     | fishnet                   | 1        | 2,44     | Moral course       | 1        | 2,44     | sticky person                   | 3        | 7,32     |
| blessing                        | 2        | 4,88     | fly                       | 1        | 2,44     | mosquito           | 1        | 2,44     | stink                           | 1        | 2,44     |
| blindness                       | 1        | 2,44     | garbage                   | 1        | 2,44     | mud                | 2        | 4,88     | supernova                       | 2        | 4,88     |
| blood                           | 1        | 2,44     | global enemy              | 1        | 2,44     | natural disaster   | 3        | 7,32     | swamp                           | 2        | 4,88     |
| bloodsucker animal              | 1        | 2,44     | glue                      | 3        | 7,32     | nk-splutter pen    | 1        | 2,44     | tag                             | 1        | 2,44     |
| book                            | 2        | 4,88     | gossip                    | 1        | 2,44     | notorious crimina  | 2        | 4,88     | tea spilled on the ground       | 1        | 2,44     |
| boomerang                       | 1        | 2,44     | hammer                    | 2        | 4,88     | obsessive lover    | 1        | 2,44     | teacher                         | 2        | 4,88     |
| borderline personality disorder | 1        | 2,44     | handcuffs                 | 2        | 4,88     | octopus            | 1        | 2,44     | telephone                       | 1        | 2,44     |
| captivity                       | 2        | 4,88     | helplessness              | 3        | 7,32     | plague epidemic    | 4        | 9,76     | The dementors in Harry Potter   | 1        | 2,44     |
| carelessness                    | 1        | 2,44     | hourglass                 | 1        | 2,44     | poison             | 1        | 2,44     | tick                            | 1        | 2,44     |
| catastrophe                     | 1        | 2,44     | human                     | 3        | 7,32     | poisonous ivy      | 1        | 2,44     | unconsciousness                 | 1        | 2,44     |
| caterpillar                     | 1        | 2,44     | iceberg                   | 2        | 4,88     | politician         | 4        | 9,76     | unhappiness                     | 1        | 2,44     |
| chain                           | 2        | 4,88     | ignorance                 | 1        | 2,44     | pomegranate stain  | 1        | 2,44     | unidentified horrible situation | 3        | 7,32     |
| characterless friend            | 1        | 2,44     | imprisoned human          | 1        | 2,44     | prison             | 5        | 12,20    | uninvited guest                 | 4        | 9,76     |
| cocklebur                       | 4        | 9,76     | incibus                   | 3        | 7,32     | reminder           | 2        | 4,88     | venomous                        | 1        | 2,44     |

|                |   |      |                          |   |      |                |   |      |         |   |       |
|----------------|---|------|--------------------------|---|------|----------------|---|------|---------|---|-------|
|                |   |      |                          |   |      |                |   |      | snake   |   |       |
| cold war era   | 1 | 2,44 | indecisive person        | 2 | 4,88 | saint          | 1 | 2,44 | war     | 7 | 17,07 |
| colonialism    | 1 | 2,44 | infinite blue of the sea | 1 | 2,44 | self/I         | 1 | 2,44 | warning | 1 | 2,44  |
| computer virus | 2 | 4,88 | influenza                | 3 | 7,32 | shrapnel piece | 3 | 7,32 | weapon  | 3 | 7,32  |
| coup           | 1 | 2,44 | ivy                      | 2 | 4,88 | slaughter      | 2 | 4,88 |         |   |       |
| dictator       | 2 | 4,88 | judgment day             | 2 | 4,88 | snail          | 2 | 4,88 |         |   |       |

### Category Development Stage

The metaphors examined by the researchers were categorized together with their explanations. At this stage, the "sample metaphor list" created about 110 metaphors has been taken as a basis. It has been examined in terms of how each metaphor conceptualizes the COVID-19 phenomenon. For this purpose, each metaphor produced by the participants was analysed and coded as the subject of the metaphor, the source of the metaphor, and the relationship between the subject of the metaphor and its source. Answers that expressing similar meanings and revealing similar perceptions are included in the same category. Participants produced 110 valid metaphors related to the COVID-19 concept and these metaphors were grouped under 10 categories. The features compiled during the category development phase and used in collecting of 110 metaphors under a certain category have been shown in Table 3.

Table 3. Ten conceptual categories and features COVID-19

| Conceptual Categories                             | Features  |
|---|---|
| COVID-19 being as a freedom restriction           | Taking away people's freedom                                    |
| COVID-19 being as an enemy                        | It takes people as a captive, It is a thing to fight for.       |
| COVID-19 being as an exam or test                 | A tough test to pass  |
| COVID-19 being as a cause of death                | The situation that brought an end to people and all activities. |
| COVID-19 being as a dangerous creature            | The scary situation or creature that endangers our lives        |
| COVID-19 being as an infectious and adhesive type | That spreads very quickly and is difficult to get rid of.       |
| COVID-19 being as spreading/contacting element    | Very fast-spreading and growing.                                |
| COVID-19 being as dirt/stain                      | The stain that not easy to be removed.                          |
| COVID-19 being as enlightening-stimulating        | Making people conscious and enlightened                         |
| COVID-19 being as uncertainty                     | It is not clear where and when it appears.                      |

### The phase of ensuring validity and reliability

In this study, it was explained in detail how the data were collected and analysed within the scope of the research to ensure the validity of the study. The categories that were obtained were presented together with sample metaphors and explanations compiled from direct

statements of the participants to provide evidence for validity. To confirm if the metaphors given under ten conceptual categories represent and question the conceptual category, the two different expert opinions, one of whom is doctorate candidate and the other one is doctor of philosophy in the field of Curriculum and Instruction, were consulted. Experts were asked to match a list containing the names and characteristics of ten conceptual categories (Table 4) and another list of 110 metaphors in alphabetical order. The matching made by the experts and the matches made by the researchers has been compared. To calculate the reliability of the comparison results, using the reliability formula ( $\text{Reliability} = \text{Consensus} / \text{Consensus} + \text{Disagreement}$ ) of Miles and Huberman (1994), the reliability value was found to be approximately 0.92 ( $\text{Reliability} = 101 / 101 + 9$ ).

### **The phase of transferring data to the computer environment**

After the identification of 110 metaphors and the development of ten conceptual categories formed by these metaphors, the frequency (f) and percentage values (%) of the metaphors and the reasons for the metaphors, the metaphors of the categories, and the number of metaphors covered by the category were calculated.



## Results

In this section, general findings from the research are presented. The ten conceptual categories developed concerning the concept of COVID-19, associated with the sample metaphor images stated by the participants with the features of each category are introduced.

Metaphors for university students' perceptions of the COVID-19 concept and distribution of metaphors into categories are given below.

Table 4. Distribution of metaphors into categories

| Categories (n=10)                                 | f  | %    | Metaphors (n=110)   | f  | %    |
|---|----|------|---|----|------|
| COVID-19 being as a freedom restriction           | 35 | 17.2 | prison, chain, dictator, swamp, incubus, politician, captivity, imprisoned human, bird with broken wing, handcuffs, cold war era, colonialism, fishnet, coup, the dementors in Harry Potter, iceberg, an old flame. | 17 | 15.5 |
| COVID-19 being as an enemy                        | 20 | 9.9  | enemy, global enemy, sneaking enemy, being absence from home, enemy that looks friendly, enemy guard, characterless friend, poison, notorious criminal, snake venom, blackthorn                                     | 11 | 10.0 |
| COVID-19 being as an exam or test                 | 6  | 3.0  | exam  | 1  | 0.9  |
| COVID-19 being as a cause of death                | 25 | 12.3 | war, natural disaster, influenza, slaughter, apocalypse, catastrophe, carelessness, unconsciousness, love, self/I, weapon   | 11 | 10.0 |
| COVID-19 being as a dangerous creature            | 17 | 8.4  | monster, snake, sneaky snake, mosquito, bloodsucker animal, octopus, tick, venomous snake, caterpillar  | 9  | 8.2  |
| COVID-19 being as an infectious and adhesive type | 20 | 9.9  | glue, cocklebur, sticky person, sticky ball, snail, borderline personality disorder, blood, unhappiness, louse beetle, ignorance, obsessive lover, boomerang  | 12 | 10.9 |
| COVID-19 being as spreading/contacting element    | 27 | 13.3 | spark, plague epidemic, computer virus, ivy, poisonous ivy, supernova, telephone, dominoes, garbage, fire, blindness, spider, black news, gossip, stink, fly  | 16 | 14.5 |
| COVID-19 being as dirt/stain                      | 9  | 4.4  | stain, pomegranate stain, mud, ink-splutter pen, black color, black paint, tea spilled on the ground  | 7  | 6.4  |
| COVID-19 being as enlightening-stimulating        | 21 | 10.3 | teacher, long train journey, book, light bulb, ability, mirror, blessing, expert, litmus paper, saint, hourglass, feeling, hammer, warning, reminder, moral course  | 16 | 14.5 |
| COVID-19 being as uncertainty                     | 23 | 11.3 | helplessness, uninvited guest, indecisive person, unidentified horrible situation, lottery ticket, human, shrapnel piece, judgment day, infinite blue of the sea, tag   | 10 | 9.1  |

**Category 1: COVID-19 being as a freedom restriction;** This category is represented as 35 participants (17.2%) and 17 metaphors (15.5%). The principal metaphors in this category are: prison (f=5), chain (f=2), dictator (f=3), swamp (f=2), incubus (f=3), politician (f=4), captivity (f=2), imprisoned human (f=1), bird with broken wing (f=2), handcuffs (f=2), cold war era (f=1), colonialism (f=1), fishnet (f=1), coup (f=1), The dementors in Harry Potter (f=1), iceberg (f=2), an old flame (f=2). The basic features of the metaphors that make this category are stated below as follows;

*COVID-19 is like a prison. Because it limits our freedom. (S-6)*

*COVID-19 is like the chain. Because it chained us home, our life has come to a stagnation point, school, job, social life has stopped at every point right now. (S-197)*

*COVID-19 is like a being captive. Because it took away our freedom from all of us. (S-26)*

*COVID-19 is like handcuffs. Because it made all of us imprisoned. (S-194)*

*COVID-19 is like the cold war era. Because it imprisoned many people in their homes or shelters and created weird psychology. (S-152)*

*COVID-19 is like a bird with a broken wing. Because its freedom has been dispossessed. (S-111)*

*COVID-19 is like dementors in Harry Potter. Because it sucks the souls of people that see, constantly chases them, and imprison them in their homes. (S-168)*

**Category 2: COVID-19 being as an enemy;** This category is represented by a total of 20 participants (9.9%) and 11 metaphors (10.0%). The principal metaphors in this category are: enemy (f=4), global enemy (f=1), sneaking enemy (f=5), being absence from home (f=2), enemy that looks friendly (f=1), enemy guard (f=1), characterless friend (f=1), poison (f=1), notorious criminal (f=1), snake venom (f=1), blackthorn (f=1). The basic features of the metaphors that make this category are stated below as follows;

*COVID-19 is like an enemy who seems like a friend. Because it conquers the castle from inside and corrupts it. (S-187)*

*COVID-19 is like an enemy. Because if we don't fight, the enemy will come and kill us. (S-3)*

*COVID-19 is like a sneaking enemy. Because the enemy will overwhelm you if you're vulnerable against him. (S-103)*

*COVID-19 is like an enemy guard who stalks outside and captures some people. Because when we go out and violate social distance, the risk of infecting us is high. (S-19)*

**Category 3: COVID-19 being as an exam or test;** This category is represented by a total of six participants (3.0%) and one metaphor (0.9%). The principal metaphors in this category are; the exam (f=6). The basic features of the metaphors that make this category are stated below as follows;

*COVID-19 is like an exam. Because we determine our results as a result of the practices we do right or wrong in terms of obeying the rules. (S-129)*

*COVID-19 is like an exam. Because human beings have a different way of living. I think this is an important test concerning beliefs and its effects and results that are required to be reviewed. (S-53)*

*COVID-19 is like a test descended by God to humans. Because as long as people stay at home, the beauties of nature emerge. This is an indicator of the damage we make to nature. (S-200)*

**Category 4: COVID-19 being as a cause of death;** This category is represented by a total of 25 participants (12.3%) and 11 metaphors (10.0%). The principal metaphors in this category are:

war (f=7), natural disaster (f=3), influenza (f=3), slaughter (f=2), apocalypse (f=2), catastrophe (f=1), carelessness (f=1), unconsciousness (f=1), love (f=1), self/I (f=1), weapon (f=3). The basic features of the metaphors that make this category are stated below as follows;

*COVID-19 is like a war. Because it caused casualties just as the war itself. (S-160)*

*COVID-19 is like the flu. Because it has symptoms and fatal consequences like severe flu. (S-173)*

*COVID-19 is like to slaughter. Because it caused the death of many people. (S-57)*

*COVID-19 is like the apocalypse. Because it caused a large number of deaths and brought human activities to a finish. (S-202)*

*COVID-19 is like to carelessness. Because it can kill people upon the slightest negligence. (S-66)*

**Category 5: COVID-19 being as a dangerous creature;** This category is represented by a total of 17 participants (8,4%) and 10 metaphors (8.2%). The metaphors in this category are: monster (f=5), snake (f=4), sneaky snake (f=2), mosquito (f=1), bloodsucker animal (f=1), octopus (f=1), tick (f=1), venomous snake (f=1), caterpillar (f=1). The basic features of the metaphors that make this category are stated below as follows;

*COVID-19 is like a monster. Because monster does not leave what it catches. (S-76)*

*COVID-19 is like a snake. Because everyone is afraid of it ... (S-9)*

*COVID-19 is like a sneaky snake. Because it approaches sneakily and injects its poison. (S-84)*

*COVID-19 is like a bloodsucking animal. Because it sucks our health. (S-178)*

*COVID-19 is like a tick. Because when infected, it hurts and is difficult to get rid of. (S-169)*

*COVID-19 is like a venomous snake. Because your life is in danger when it stings. (S-115)*

**Category 6: COVID-19 being as an infectious and adhesive type;** This category is represented by a total of 20 participants (9.9%) and 11 metaphors (10.9%). The dominant metaphors in this category are: glue (f=3), cocklebur (f=4), sticky person (f=3), sticky ball (f=1), snail (f=2), borderline personality disorder (f=1), blood (f=1), unhappiness (f=1), louse beetle (f=1), ignorance (f=1), obsessive lover (f=1), boomerang (f=1). The basic features of the metaphors that make this category are stated below as follows;

*COVID-19 is like a glue. Because it is contagious even in a small proximity. (S-113)*

*COVID-19 is like a cocklebur. Because as you try to remove it, it sticks more. (S-164)*

*COVID-19 is like a sticky person. Because once he/she sticks never leaves. (S-37)*

*COVID-19 is like a snail. Because when it gets stuck, it doesn't let us go. (S-123)*

*COVID-19 is like an individual with a borderline personality disorder. Because if a person is infected, it sticks, even if the person is cured, he/she infects the others ... (S-195)*

*COVID-19 is like unhappiness. Because a person spreads his/her unhappiness to those around him/her. (S-120)*

**Category 7: COVID-19 being as spreading / contacting element;** This category is represented by a total of 27 participants (13.3%) and 16 metaphors (14.5%). The dominant metaphors in this category are: spark (f=4), plague epidemic (f=3), computer virus (f=2), ivy (f=2), poisonous ivy (f=1), supernova (f=2), telephone (f=1), dominoes (f=2), garbage (f=1), fire (f=1), blindness (f=1), spider (f=2), black news (f=1), gossip (f=1), stink (f=1), fly (f=1). The basic features of the metaphors that make this category are stated below as follows;

*COVID-19 is like a spark. Because it sets fire to everything that it touches. (S-186)*

*COVID-19 is like a poisonous ivy. Because it grows rapidly and wraps up everywhere. (S-24)*

*COVID-19 is like an ivy. Because it spreads and covers all sides. (S-54)*

*COVID-19 is like a forest fire. Because it spreads very quickly and burns and kills the places it passes through. (S-81)*

*COVID-19 is like a stink. Because you cannot keep it, you cannot hide it, it reaches the place wherever it wants to reach and leaves an unpleasant feeling. (S-45)*

**Category 8: COVID-19 being as dirt / stain;** This category is represented by a total of nine participants (4.4%) and seven metaphors (6.4%). The dominant metaphors in this category are: stain (f=2), pomegranate stain (f=1), mud (f=2), ink-splutter pen (f=1), black color (f=1), black paint (f=1), tea spilled on the ground (f=1). The basic features of the metaphors that make this category are stated below as follows;

*COVID-19 is like a permanent stain on the shirt which you liked very much. Because if you can't clean it, you throw it in the garbage. (S-97)*

*COVID-19 is like a pomegranate stain. Because you get sick without realizing it and you don't recover easily. (S-125)*

*COVID-19 is like a mud. Because if it is not cleaned well, the stain will always remain. (S-128)*

*COVID-19 is like black colour. Because it has darkened the world. (S-104)*

*COVID-19 is like black paint. Because the moment it gets contaminated with another colour, it manifests itself, is stubborn and does not come off easily. (S-109)*

**Category 9: COVID-19 being as an enlightening-stimulating;** This category is represented by a total of 21 participants (10.3%) and 16 metaphors (14.5%). The dominant metaphors in this category are: teacher (f=2), long train journey (f=1), book (f=2), light bulb (f=1), ability (f=1), mirror (f=1), blessing (f=2), expert (f=1), litmus paper (f=1), saint (f=1), hourglass (f=1), feeling (f=1), hammer (f=1), warning (f=1), reminder (f=2), moral course (f=1). The basic features of the metaphors that make this category are stated below as follows;

*COVID-19 is like a book. Because it is like a book that makes people calm down, turn inside; leads them to think about their rights and wrongs, their past and the future. (S-62)*

*COVID-19 is like light bulbs. Because it enlightens society increasingly. (S-196)*

*COVID-19 is like a previously lost but recently recovered ability. Because it gave us chance to be ourselves, to spare time for ourselves and to understand how precious our life is. (S-182)*

*COVID-19 is like a litmus paper. Because it separates the ignorant and the wise. (S-133)*

*COVID-19 is like teachers. Because it is a good example of a wasteful, thoughtless, ignorant society. (S-42)*

**Category 10: COVID-19 being as uncertainty;** This category is represented by a total of 23 participants (11.3%) and 10 metaphors (9.1%). The dominant metaphors in this category are: helplessness (f=3), uninvited guest (f=4), indecisive person (f=2), unidentified horrible situation (f=3), lottery ticket (f=1), human (f=3), shrapnel piece (f=3), judgment day (f=2), infinite blue of the sea (f=1), tag (f=1). The basic features of the metaphors that make this category are stated below as follows;

*COVID-19 is like a lottery ticket. Because it can hit anyone. (S-108)*

*COVID-19 is like a human. Because you don't know if anybody can hurt you or not. (S-150)*

*COVID-19 is like a piece of shrapnel. Because no matter how many precautions you take, it is unpredictable when and where it will penetrate. (S-171)*

*COVID-19 is like an unidentified horrible situation that I cannot identify. Because it is uncertain. (S-155)*

*COVID-19 is like helplessness. Because no cure has been found and it is unclear when it will be found. (S-63)*

## Discussion, Conclusion and Suggestions

The main purpose of this research is to analyze and examine university students' perceptions about COVID-19 through metaphors. The findings obtained from the analyzes made for this purpose are discussed below. From the content analysis performed in this study, 110 metaphor images were obtained and these metaphors were represented in ten different conceptual categories. It was revealed that university students emphasized the different features of the COVID-19 pandemic with these metaphors. In this research, based on the metaphors formed by university students regarding the COVID-19; Ten conceptual categories were obtained as freedom restriction, enemy, test/exam, cause of death, dangerous creature, infectious and adhesive type, spreading/contacting element, dirt/stain, enlightening-stimulating, and uncertainty. When these conceptual categories were examined, it was determined that university students stated COVID-19 in the "freedom restriction" category as the most commonly used metaphor. This category is numerically defined as "COVID-19 being as spreading/contacting", "COVID-19 being as a cause of death", "COVID-19 being as uncertainty", "COVID-19 being as enlightening-stimulating", "COVID-19 being as spreading/contacting element", "COVID-19 as an enemy", "COVID-19 as a dangerous creature", "COVID-19 as dirt-stain", "COVID-19 as exam/test" categories followed. Within the categories created with reference to the research findings, 17.2% of the university students, in the explanations of the metaphors they produced in the category of "freedom restriction", has seen and defined COVID-19 as chaining us to the house, taking away the freedom of people, and imprisoning people in their homes by sucking their souls. From this perspective, it can be concluded that university students perceive the COVID-19 and its effects on people accurately at a high rate. Considering the effects of COVID-19 in the world, it is thought that curfews are applied in many countries, face to face education is replaced by distance education, meetings and social events have been cancelled or postponed, working life is moved to homes, travel restrictions are imposed, it is expected that university students define COVID-19 as freedom restriction. This finding is similar to the study in Dönmez and Gürbüz (2020) which the perception of prison about COVID-19. Within the categories created with regard to the research findings; when the metaphors they produced in the category of "spreading/contacting COVID-19" are examined; 13.3% of university students was found to perceive COVID-19 like setting fire to everywhere it touched, rapidly developing and spreading and unstoppable. In accordance with the data of the World Health Organization, there were 5 confirmed cases of COVID-19 on January 17, 2020, while this number reached 32,730,945 (<https://covid19.who.int/>) cases on September 27, 2020, is the most important evidence of how rapidly the epidemic has spread. From this point of view, it is quite natural for university students to define COVID-19 as a rapidly spreading situation. 12.3% of university students within the categories created pursuant to the research findings When the metaphors they produced in the category "COVID-19 as the cause of death" are examined, they have seen and described COVID-19 as causing loss of life as much as war, as flue that may cause fatal results, a slaughter that causes deaths, carelessness that kills at the slightest negligence. This finding is similar to the study in Dönmez and Gürbüz (2020) which the perception of death about COVID-19. In this category, when evaluated with regard to the data of the World Health Organization, considering that the number of deaths from COVID-19 worldwide as of September 27, 2020, is 991.224 (<https://covid19.who.int/>). The underlying reason for university students' perception of the virus as the cause of death can be understood more clearly.

Within the categories created in relation to the research findings, in the category of "COVID-19 as uncertainty", once the metaphorical statements of university students' are examined, 11.3% of the students described COVID-19 as a lottery ticket that is unclear for whom it hits, it looks like a human whom you are unsure whether he/she is harmful or not. It looks like a piece of shrapnel that where it will target is not clear, unidentified uncertain, and terrible situations. The fact that a definitive treatment method still cannot be found for COVID-19 worldwide and a definite result has not been obtained in vaccine development studies is a reason that supports the perception of COVID-19 as "uncertainty" among the university students.

Within the categories created in compliance with research findings, 10.3% of the university students were examined in the "COVID-19 as enlightening-stimulating" category. When the metaphors that they produced are examined; they described COVID-19 as a book which leads people to calm down and turn to inside, makes one think about the rights and wrongs for the past and the future. Some students produced COVID-19 as a light bulb that illuminates the society, a warning sent to warn humanity, a litmus paper to distinguish between the educated and the illiterate, a teacher enlightening ignorant societies. University students may have perceived COVID-19 in this way because people faced so many deaths during the COVID-19 process, the disruption of daily life routines caused people to question themselves again in every vital field.

The 9.9% of university students within the categories created aligned with the research findings, when their metaphorical statement of "COVID-19 as an infectious and adhesive type" is examined; it has been observed that they describe it as a sticky plant that spreads even in small proximity, a cocklebur plant that does not come off when it sticks, an importunate person who does not leave when he/she sticks, and an unhappy person who spreads his/her unhappiness to those around him/her. According to the Turkish Academy of Sciences-TÜBA (2020), the doubling period of the epidemic is stated as 23 days. This situation supports the definition of COVID-19 as "contagious and adhesive type" by the university students.

Within the categories created with regard to the research findings, 9.9% of university students are in the "COVID-19 as an enemy" category. When the metaphors they produce are examined; It has been seen that they define COVID-19 to us, as a sneaky enemy who defeats us in vulnerable situations, an enemy guard who will catch us if we go out. China, where COVID-19 was first seen, the authorities to cope up with COVID-19 and define it as a war precaution, so university students perceive the virus as an enemy can be interpreted as an expected situation. (<https://www.sabah.com.tr/galeri/dunya/son-dakika-cin-savas-ilan-etti-dunya-sarsiliyor/35>).

The 8.4% of university students within the categories created related to the research findings, once the metaphors they produce are examined, on the category that "COVID-19 as a dangerous creature" It has been seen that they describe it as a monster that does not let go of what it has caught, a sly and venomous snake that everyone fears, and blood-sucking animal. Considering its negative effects around the world, it can be interpreted as quite logical for university students to define COVID-19 as a dangerous creature. Within the categories created in reference to the research findings, once the metaphors of university students are examined, on the category that COVID-19 as dirt or stain, 4.4% of them has been observed as describing it as dirt or stain that does not come off easily when stained, a black color that darkens the world, and a mud stain that cannot be removed if not cleaned properly.

When analyzing the data in the “Republic of Turkey Ministry of Health COVID-19 Daily Situation Report dated 25.09.2020 is examined; the number of new patients is 1666, the number of new hospital discharges is 443 ([https://covid19.saglik.gov.tr/Eklenti/38778/0/covid-19-daily-situation-report-25092020pdf.pdf?\\_tag1=D543364A85E7AEF38DCCF890B8F4701BDDA1E87C](https://covid19.saglik.gov.tr/Eklenti/38778/0/covid-19-daily-situation-report-25092020pdf.pdf?_tag1=D543364A85E7AEF38DCCF890B8F4701BDDA1E87C)). It is logical for university students to perceive COVID-19 as a stain that does not come off easily when infected, that is, a situation that does not heal immediately and cannot be easily removed.

Within the categories created in reference to the research findings, once the metaphors of university students are examined, on the category that COVID-19 as a test/exam, 3% of them describe it as the exam where we determine our own results with our behaviors that are right or wrong. Also, it has been seen that they defined it as a test that God puts people through. German President Frank-Walter Steinmeier, who is one of the world leaders in the pandemic process; "COVID-19 outbreak is a test for our humanity" (<https://tr.euronews.com/2020/04/12/almanya-cumhurbaskan-steinmeier-COVID-19-salgini-insanlik-icin-bir-sinav-video-izle-corona>).

Russian President Vladimir Putin "The fight against COVID-19 was a test of humanity.” (<https://tr.sputniknews.com/rusya/202004301041944251-putin-koivd-19la-mucadele-insanlik-sinavi-oldu/>). It has been seen that similar definitions have been made regarding COVID-19.

### **Suggestions**

1. This study is limited to education faculty students. Studies can be conducted in Turkey with students who are studying in different faculties of universities in different regions. Thus, a comparative evaluation study can be carried out as well.
2. Research can also be conducted with students at different education levels.
3. The study can be carried out in different regions, with different professions, and with different groups of people.



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