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ORIGINAL ARTICLE

Metaphorical perceptions of university students experiencing Kahramanmaraş Pazarcık and Elbistan earthquakes on the concept of 'earthquake': case of physiotherapy and rehabilitation department

Kahramanmaraş Pazarcık ve Elbistan depremlerini yaşayan üniversite öğrencilerinin 'deprem' kavramına ilişkin metaforik algıları: fizyoterapi ve rehabilitasyon bölümü örneği

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Abstract

Purpose: This study was carried out to determine the metaphorical perceptions of the earthquake of Physiotherapy and Rehabilitation students who experienced the Kahramanmaras, Pazarcık and Elbistan earthquakes.

Methods: In the study, phenomenology research design based on qualitative research approach was used. The participants of the research consist of 120 students who experienced the February 6 Kahramanmaraş Pazarcık-Elbistan earthquakes, studying at Hasan Kalyoncu University Physiotherapy and Rehabilitation Department in the 2022-2023 academic

Results: The students reproduced a total of 51 metaphors. As a result of the analysis of these metaphors, 9 categories were determined. It is seen that a large number of metaphors have been produced in this study about 'doomsday', 'death', 'helplessness' and 'disaster'. The most metaphors were produced in the categories of 'End of life' (f:31), 'Natural event' (f:20), 'Despair-related' (f:18) and 'State of Health' (f: 16).

Conclusion: It is seen from the metaphors that Kahramanmaraş Pazarcik and Elbistan earthquakes have more negative effects on the minds of Physiotherapy and Rehabilitation students. Since the impact of the earthquake will continue for some time on the educational life and psychosocial state of the students, it is important to establish a professional team and their supporting. Putting a course in the curriculum specifically in the 'earthquake' plan and in the 'disaster' plan in general may contribute to their being able to get through this process with less impact.

Keywords: Earthquake, Metaphor, Physiotherapy, Students.

Öz

Amaç: Bu çalışma, Kahramanmaraş Pazarcık ve Elbistan depremlerini yaşayan Fizyoterapi ve Rehabilitasyon öğrencilerinin depreme ilişkin metaforik algılarını belirlemek amacıyla gerçekleştirilmiştir.

Yöntem: Araştırmada nitel araştırma yaklaşımına dayalı fenomenoloji araştırma deseni kullanılmıştır. Araştırmanın katılımcılarını, 2022-2023 eğitim öğretim yılında Hasan Kalyoncu Üniversitesi Fizyoterapi ve Rehabilitasyon Bölümü'nde öğrenim gören ve çalışmaya katılmayı kabul eden depremi yaşamış 120 öğrenciden oluşmaktadır.

Bulgular. Öğrenciler toplam 51 metafor üremişlerdir. Bu metaforların analizi sonucunda 9 kategori belirlenmiştir. Bu çalışmada "kıyamet", "ölüm", "çaresizlik" ve "felaket" konusunda çok sayıda metafor üretildiği görülmektedir. En fazla "Yaşamın sonu" (f: 31), "Doğa olayı" (f: 20), "Umutsuzlukla ilişkili" (f:18) ve "Sağlık Durumu" (f: 16) kategorilerinde metaforlar üretilmiştir.

Sonuç: Kahramanmaraş Pazarcık ve Elbistan depremlerinin, Fizyoterapi ve Rehabilitasyon öğrencilerinin zihninde daha fazla olumsuz etki bıraktığı ürettikleri metaforlardan görülmektedir. Depremin etkisi, öğrencilerin eğitim hayatı ve psikososyal durumu üzerinde bir süre daha devam edebileceğinden profesyonel bir ekip kurularak onların desteklenmesi önemlidir. Müfredat programına özelde 'deprem', genelde ise 'afet' planında bir ders konulması onların bu süreci daha az etkilenimle atlatabilmeleri açısından katkı sunabilir.

Anahtar kelimeler: Deprem, Metafor, Fizyoterapi, Öğrenciler.

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INTRODUCTION

Earthquakes are among the deadliest natural disasters. Earthquakes have always existed since the existence of the Earth. Earthquakes, which have a serious negative impact on life due to their destructive effect, are out of control and unpredictable. It causes people to be seriously affected biopsychosocially. Therefore, it can leave deep and lasting effects on people.1 People can show different attitudes towards earthquakes; gender, ethnicity, social class, knowledge and experience related to the socio-economic and socio-cultural disaster. characteristics affect their behavior. Researchers therefore take these differences into account when planning training modules, materials, programs and approaches.²

Due to the risks encountered in disasters, changes in human mood can be observed. Although these emotions are generally seen as negative, positive emotions can also be observed depending on the magnitude of the disaster and individual characteristics. The reaction of individuals of all ages to disasters can be different from each other. However, children and young people are more affected in this regard. Therefore, it is important to understand the reactions of this population.3 Turkey, as a developing country, has had to deal with the devastating impact of earthquakes. The recent earthquakes in Pazarcık and Elbistan districts of Kahramanmaras caused great destruction and many people lost their lives.4 One of the most affected groups in this process is university students. Data on how much university students in the young population were affected by the earthquake will shed light on the researchers. Examining university students who experienced Kahramanmaraş Pazarcık and Elbistan centered earthquakes, which caused great destruction in our country, can contribute in this respect.

Since it is not possible to prevent earthquakes, it is necessary to focus on their impact on students. It is known that earthquake, which is one of the natural disasters, leaves a number of negative effects in economic, social, sociological and educational fields. Especially education life is seriously affected. When the literature is examined; the views of students who have and have not experienced the earthquake, secondary school

students⁷ and high school students⁸ towards earthquake were examined. Examining the perceptions of university students who have experienced the earthquake will contribute to the literature.

One of the ways for students to express their thoughts about earthquake is the use of metaphors. Expressing thoughts on the same subject by using different metaphors is a remarkable approach. In this way, evaluation is made on the same subject by seeing perspectives from different perspectives. With the use of metaphors, individuals can express their ideas that they have difficulty in expressing more easily.⁹

This natural disaster caused significant disruptions in students' daily lives. 10 Therefore, understanding and supporting students' feelings about this issue will make them psychosocially stronger. In this respect, it is necessary to analyze how students feel. Physiotherapy and rehabilitation (PTR) is one of the important branches of the rehabilitation field that performs a biopsychosocial approach to reduce the physical, psychological and social effects of the earthquake. In this study, we aimed to learn how physiotherapist candidates studying in this department feel about earthquake through metaphors. The research questions used to achieve this goal are as follows:

- 1. Which metaphors were used by PTR students about "earthquake"?
- 2. How can the metaphors used by PTR students be categorized?

METHODS

Phenomenology research design based on qualitative research approach was used in the study. Phenomenological research aims to understand how a phenomenon is perceived by individuals. Experiences are tried to by reaching analyzed the essence perception.¹¹ The participants of the study consisted of 120 students who were studying at Hasan Kalyoncu University PTR Department in the 2022-2023 academic year and who had experienced the February 6 Kahramanmaraş Pazarcık-Elbistan earthquakes and who agreed to participate in the study. Although data were collected from 126 students in this study, data were lost due to the fact that 6 students did not

respond as specified in the form while the data were transferred to digital media. Since the study aims to reveal the metaphorical perceptions of PTR students, the sampling technique of the study is purposive sampling. The reason why this technique is preferred is to increase the representativeness of the sample to the universe by saving the researchers' time and ensuring that appropriate people are included in the research in line with the purpose of the research.¹²

Statistical analysis

The perceptions of the PTR students included in the study regarding the concept of "Earthquake" were determined with the sentence "Earthquake is like; Because" sentence was tried to be determined. In order to determine the metaphor perception of the students towards earthquake, an online form prepared through "Google form" was prepared. In this form, they were asked to complete the sentence "Earthquake is like; because". In the prepared form, they were asked to focus on a metaphor and write down their thoughts in this direction. The sentences written by the students were evaluated by content analysis.

The analysis and interpretation of the sentences expressed by the students were made by considering 5 stages. While these 5 stages were carried out, Saban's¹³ study was utilized (Figure 1).

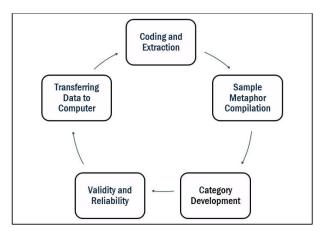


Figure 1. Data analysis and interpretation stages.8

In the coding and sorting phase, the metaphors produced by the PTR students were coded in order. Then the metaphors were grouped by 'metaphor and content analysis' method. The metaphors were read and categorized again and again and 9 categories were formed in total. In the category development stage, the metaphors produced by the students for the concept of earthquake were divided into groups by considering their common features and justifications. At this stage, a total of nine groups were formed. The determination of these categories and the reasons for naming them are as follows:

- The metaphors produced in the first category were paired with concepts such as disaster, destruction and lightning for earthquake and justifications were presented accordingly. Therefore, the metaphors in this category were grouped under the category of natural phenomenon.
- When the justifications of the metaphors in the second category were examined, it was found that the earthquake evoked associations with frightening and frightening events in daily life. Therefore, the metaphors in this category were grouped under the category of scary and frightening events.
- The rationale for the metaphors in the third category is related to people's emotions. In the expressions where abstract thoughts are seen, it is stated that the earthquake arouses negative emotions in students. Therefore, the metaphors in this category were grouped under the mood category.
- When the rationales of the metaphors in the fourth category were examined, it was observed that individuals likened the earthquake more to the difficult processes of diseases such as heart attack, illness, cancer and pain. Therefore, the metaphors in this category were grouped under the category of health status.
- When the justifications of the metaphors in the fifth category are examined, it is due to the fact that the students subjected the earthquake to concept pairings such as helplessness, tongue-tied and prisoner of fate, which express the exhaustion of hopes. Therefore, the metaphors in this category were grouped under the category of hopelessness.
- When the metaphors in the sixth category were analyzed, it was seen that the earthquake was compared to the damage caused by the enemy. Since this category was associated with concepts such as bomb, war and sledgehammer,

the metaphors were collected in the enemy category.

The metaphors in the seventh category are seen to have an impact on the participants' beliefs. Since the exam of the life studies course was associated with concepts such as surrender, hell and nature's warning, these metaphors were collected in the category of belief.

- When the rationales of the metaphors in the eighth category were examined, it was observed that the metaphors created a perception that the end of life had come. Metaphors such as apocalypse, death and extinction were grouped under the category of death since they reinforced the perception that life comes to an end.

- In the ninth category, metaphors such as drowning, broken swing, dead end and dice were produced. These metaphors were grouped under the categories related to other situations.

The validity-reliability analysis of the themes was calculated using Miles Huberman's formula. In this formula, the ratio of consensus and non-consensus is calculated. The result is then multiplied by 100. This is the reliability coefficient. The result is generally expected to be above 80.14 Using this formula [Agreement / (Agreement + Disagreement) x 100 reliability analysis was performed. It was seen that PTR students produced a total of 51 metaphors. There was disagreement in 6 of the metaphors expressed. Using this formula, the result was found to be $89.47\% [51/(51+6) \times 100]$ = 89.47%]. The result obtained was at the desired level. Regarding the validity analysis, opinions were taken from people who have general knowledge about the research topic and who are specialized in qualitative research to examine the research.

The 51 metaphors created by the students were divided into 9 categories and transferred to the computer. Frequency (f) values of metaphors and categories were calculated. The frequencies were expressed in the tabulation of the metaphors and categories obtained. Then, the thoughts expressed about the metaphors and categories expressed in the table were expressed in the findings section.

Ethics committee

Within the scope of the research, permission was obtained from Igdir University Scientific Research and Publication Ethics Committee (Date: 16.03.2023, issue: 2023/5). Voluntary

participation in the research was requested. It was stated that the answers given will be acted in accordance with the principle of confidentiality and will never be used except for scientific studies. All participants were asked to approve the informed consent form before participating in the study. Students who did not approve the informed consent form were excluded from the study via Google form. Our study was conducted in accordance with the principles of the Declaration of Helsinki.

RESULTS

In this section, the metaphors expressed by the PTR students participating in the study about the concept of "Earthquake" are explained. The sentences they expressed for these metaphors were shown as examples. The findings obtained by analyzing the data were expressed systematically in line with the purpose of the research. The frequency values of the metaphors produced are shown in Table 1. The opinions expressed by the students are shown as 'PST' which means participant student.

Table 1 shows that PTR students expressed 51 metaphors related to the concept of "earthquake". The most frequently expressed metaphors are; "Apocalypse" (f: 15), "Death" (f: 13), "Despair" (f: 12,), "Disaster" (f: 9) and "Destruction" (f: 7).

As indicated in Figure 2, it is seen that PTR students mainly produced the metaphors of "apocalypse, helplessness, death, destruction, disaster, nightmare". Considering the metaphors produced, it can be inferred that the PTR students who experienced the earthquake experienced more helplessness and felt that the end of life had come. The dominant metaphors expressed by the students are clearly visible in the word cloud (Figure 2).

In Table 2, the metaphors produced by the PTR students were grouped into 9 categories in terms of similar characteristics. Most metaphors were produced in the categories of "End of life" (f: 31), "Natural event" (f: 20), "Related to despair" (f: 18) and "Health status" (f: 16). The sentences expressed by the students were shown as 'PST' as the abbreviation of PTR student. Sample sentences expressed by PTR students in 9 categories are as follows;



Figure 2. Word cloud for metaphors expressed by the students.

First Category "Natural Event"

"An earthquake is like lightning; for it also gives me fear and anxiety". PST35

"The earthquake is actually like a great disaster in itself; because the earthquake made us feel the pain of our relatives and loved ones. We are afraid to enter our homes, which we know to be the safest". PST40

"An earthquake is like the wind; for while a little does no harm, much sweeps away". PST89

"An earthquake is like destruction; because my hopes, my dreams, my resentments are all destroyed. Not only the buildings, but all the things I have lived and all the things I will live will be wrecked". PST90

"Earthquake is like a sea wave; because it makes me feel helpless". PST94

Second Category "Scary and frightening event"

"Earthquake is like being chewed in a huge mouth; because it causes both pain and crushing". PST18

"An earthquake is like a knife, because our lives are tied by a thread, and it tears away many lives that are tied by that thread. PST22

"An earthquake is like a horror movie because you can't forget what you see even after years" PST55

"Earthquakes are like my phobias; because

I am afraid of graves and the place where I stay during an earthquake suddenly becomes a cemetery and evokes very bad feelings". PST29

"An earthquake is like darkness, because there is nothing left under the rubble to illuminate my heart and my eyes. PST113

"An earthquake is like a nightmare that doesn't end when we wake up because we realize how powerless we are against nature". PST116

Third Category "Mood State"

"Earthquake is like a panic attack because it creates fear, restlessness, anxiety and curiosity". PST30

"Earthquake is like empathy; because it was the time when I learned to treat everyone in my family unconditionally, when I thought of them more than myself. Everything I broke and resented seemed meaningless to me. The earthquake made me feel being human. It made me feel to cry for others, to feel sad, to feel the pain of people I don't know". PST43

"An earthquake is like a spiritual breakdown, because it causes me pain and I can never see the light". PST50

"An earthquake is like a shock because it feels strange". PST61

Fourth Category "Health Status"

"An earthquake is like pain, because it comes suddenly and lasts for a while". PST12

Table 1. Metaphors defined by the students regarding the concept of earthquake.

No	Metaphor	n
1	Apocalypse	15
2	Death	13
3	Despair	12
4	Disaster	9
5	Demolition	7
6	Heart attack	6
7	Panic attack	5
8	Nightmare	3
9	Disease	3
10	Shock effect	2
11	Drowning	2 2 2
12	Tongue-tied	2
13	Fear	2
14	Pain	2
15	Broken swing	1
16	Empathy	1
17	Dice	1
18	Waiting in front of the operating room	1
19	Time stoppage	1
20	Chewed in the mouth	1
21	Dead end street	1
22	Knife	1
23	Tachycardia	1
24	Unexpected event	1
25	Phobia	1
26	Breathlessness	1
27	Vertigo	1
28	Mental breakdown	1
29	Where words fail	1
30	Nature's warning to humans	1
31	Cancer	1
32	Prisoner of fate	1
33	Ferris wheel	1
34	Sledgehammer	1
35	Life science exam	1
36	Creditor	1
37	Swamp	1
38	Fxtinction	1
39	Daniotion	1
39 40	Hell Wind	1
41	Horror movie	1
42		1
42 43	Lightning Murder	1
		1
44 45	Bad dream	
45 46	Infection	1
46	Sea wave	1
47	Punishment	1
48	Surrender	1
49	War	1
50	Bomb	1
51	Darkness	1
	Total	120

"An earthquake is like a heart attack because it comes suddenly and makes you feel the nearness of death". PST13

"An earthquake is like cancer, because there is an uncontrollable panic that grows uncontrollably as a result of the tremor". PST36

"An earthquake is like a sudden attack of vertigo, because it makes you feel like everything you see is spinning". PST56

"An earthquake is like a disease, because it comes suddenly and makes you panic and forget what to do. It makes faces in darkness feel as if they are defenseless in the face of the enemy". PST103

"An earthquake is like an infection because after an earthquake there is loss of function, redness, pain, edema and increased temperature". PST109

Fifth Category "Associated with Hopelessness"

"An earthquake is like waiting in front of a pale operating room not knowing how your loved one is doing; because an earthquake makes me feel uneasy as if I will lose the people I love at any moment". PST14

"The earthquake is like the end of the word; because it made me feel so bad, my only wish is to never experience it again". PST51

"An earthquake is like helplessness; you realize how cheap life is and how easy death is, and you can never find a cure for it". PST65

"Earthquake is like a prisoner of fate; because you pay for the negligence of others". PST83

"An earthquake is like a tongue-tied tongue, because the words become a knot on your tongue. I have words to say to my loved ones, but those beautiful sentences do not come out of your mouth. In the regret of being late, your tongue cannot say it, but your heart says if only". PST119

Sixth Category "The Enemy"

"An earthquake is like a bomb, because it is unpredictable and destroys everything". PST49

"Earthquake is like a creditor; because it makes you feel that wherever you run, you will find it everywhere". PST70

"An earthquake is like war because it scares you and you don't know what's going to fall on your head and when." PST99

"Earthquake is like a sledgehammer; because no matter how strong you make it, that building will never remain intact with those

blows". PST104

Seventh Category "Faith"

"An earthquake is like a bad punishment, because people pay for what they have done with an earthquake slap. This punishment is so bad that it may not give you another chance". PST5

"An earthquake is like nature's warning to humans; because we have harmed nature so much that it felt the need to tell us to stop". PST60

"Earthquake is like hell; because it torments" PST78

"An earthquake is like surrender, because at that moment you are so scared that you have no choice but to surrender". PST97

"Earthquake is like the exam of life science lesson; because you pay the price for not realizing the things explained and you get your grade". PST106

Eighth Category "End of Life"

"Earthquake is like death; because people die, but those who do not die are psychologically dead". PST8

"Earthquake is like murder; because it is no different from it due to the precautions not taken, avoiding the material while building, not being properly inspected". PST37

"An earthquake is like a small apocalypse; because you think you will lose all your relatives, your property, your dreams and all your hopes for the world in a moment, and that's when you realize how short life is". PST68

"An earthquake is like annihilation; because in an instant, all your loved ones, dreams and efforts are gone. Yet you still struggle to live". PST77

Ninth Category "Associated with Other Situations"

"An earthquake is like a broken swing; because during that time different sounds scratch your ears and make you feel that you are never safe". PST6

"An earthquake is like quicksand; because the more you struggle at that moment, the more you try to escape, the more damage you will suffer". PST24

"Earthquake is like dice, because you don't know what will happen to you in the end". PST39

"Earthquake is like a dead-end street; because when the tremor starts, you cannot find another way on the street of death". PST52

"An earthquake is like drowning, because at

that moment you realize that you are a living dead". PST66

"Earthquake is like a Ferris wheel; because you don't know which of us will be taken from the earth first". PST95

DISCUSSION

According to the findings of the study, PTR students who experienced Kahramanmaras Pazarcık and Elbistan earthquakes produced 51 "earthquake". metaphors about These metaphors are grouped into 9 categories. It is that earthquake creates different connotations on students. It is known that metaphors allow people to express how they feel about life, the environment, objects and the events experienced through analogy. Through metaphor analysis, the images formed in the mind are revealed and there are many studies on this subject focusing on different topics. 15, 16

In a study, it was observed that students who experienced an earthquake were more likely to prioritize perceptions of the end of life such as 'doomsday', 'death' and 'grim reaper'. 6 In a study examining the metaphorical perceptions of Emergency Aid and Disaster Management Students about the concept of "Earthquake"; it was seen that 'death', 'apocalypse' and 'disaster' metaphors were frequently used. In addition to these, it was seen that interesting metaphors such as 'bridge', 'domino', 'punishment', 'bond', 'struggle', 'prison', 'knife' and 'cyanide' were produced. 17

In our study, it is seen that many metaphors were produced about 'apocalypse', 'death', 'helplessness' and 'disaster'. In this respect, it can be said that the students who experienced the earthquake perceive that the end of life has come. The fact that the PTR students who participated in the research experienced the earthquake may have caused them to produce metaphors about the end of life. In addition, it is understood that they were very afraid of this earthquake from the metaphors they expressed in the category of frightening and frightening event (nightmare, horror movie, being chewed in the mouth). This negatively affected their emotional state. Therefore, they developed metaphors about 'panic attack', 'shock', 'mental breakdown' and 'fear'. It is seen that the destruction and losses caused by the earthquake reinforced the feeling of hopelessness in them

Table 2. Metaphor categories produced by the students regarding the concept of earthquake.

No	Category	Metaphor	n	Total
1	Natural Phenomenon	Disaster	9	20
		Demolition	7	
		Lightning	1	
		Unexpected event	1	
		Wind	1	
		Sea wave	1	
2	Scary and Frightening Event	Nightmare	3	8
		Phobia	1	-
		Bad dream	1	
		Chewed in the mouth	1	
		Knife	1	
		Horror movie	1	
3	Emotion State	Panic attack	<u>-</u> 5	11
		Shock	2	
		Fear	2	
		Mental breakdown	1	
		Empathy	1	
4	Health Status	Heart attack	6	16
	neath otatas	Disease	3	10
		Pain	2	
		Cancer	1	
		Breathlessness	1	
		Infection	1	
		Vertigo	1	
		Tachycardia	1	
5	Despair	Despair	12	18
Ū	Doopan	Tongue-tied	2	10
		Prisoner of fate	1	
		Waiting in front of the operating room	1	
		Darkness	1	
		Where words fail	1	
6	Enemy	Bomb	1	4
	Literaly	War	1	·
		Sledgehammer	1	
		Creditor	1	
7	Faith	Life science exam	1	5
	Talai	Surrender	1	· ·
		Hell	1	
		Nature's warning to humans	1	
		Punishment	1	
8	The End of Life	Apocalypse	15	31
	THE LINE OF LINE	Death	13	31
		Extinction	13	
		Murder	1	
		Time stoppage	1	
9	Related to Other Circumstances	Drowning Drowning	2	7
9	Notated to Other Offchillstances	Broken swing	1	,
		Dead end street	1	
		Dice	_	
		Ferris wheel	1	
			1	
		Swamp	1	

and they produced metaphors in this direction (such as darkness, the place where the word ends and helplessness). In a study conducted by Kurt and Gülbahçe,18 they emphasized that students may experience various psychological problems after the earthquake and that the effects of this may continue even years later. The metaphors expressed by PTR students in the mood category support this. Short-term fear and panic are likely to have long-term consequences. It may be recommended to conduct studies to address the emotional statesof students after the devastating Kahramanmaraş earthquakes. In this way, their emotional states can be improved and their negative emotions associated with hopelessness can be reduced.

The metaphors of 'pain', 'heart attack', 'cancer', 'breathlessness', 'infection' and 'vertigo' indicate that they associate the education they have received with the earthquake. These examples may be related to the perspective provided by professional knowledge. In their study, Yılmaz and Kocamaz¹⁹ emphasized the necessity of establishing common strategies in field of rehabilitation after the Kahramanmaras earthquake, which had devastating consequences on February 6, 2023. It was stated that it was important to understand the effects of the earthquake on healthy and sick individuals separately. They pointed out that multidisciplinary rehabilitation workers should act jointly to appropriate rehabilitation approaches without delay.¹⁹ Examining the situation of PTR students who will contribute to the rehabilitation field from this point of view will be able to transform these negative thoughts into experience in the future and enable them to contribute in this multidisciplinary team by providing a proactive approach in possible earthquakes.

Students expressed that the earthquake had similar aspects with the damage caused by the enemy. These feelings come to the fore with the metaphors of 'bomb', 'war', 'sledgehammer' and 'creditor'. Although negative thoughts appear under the enemy category, the metaphors in the belief category are also striking. It was assumed that the earthquake generally created negative feelings, but some students assumed that the earthquake could have a message with the perspective given by

faith. It can be said that faith contributes to reduce the negative feelings caused by the earthquake to some extent. In addition, it is also important that some students expressed the idea that the mistakes made by human beings relation to the earthquake would be reciprocated and drew attention to the lesson that could be learned after the earthquake. In a study conducted by Doğan et al.7 among middle school students, it was observed that students earthquake associated with religious arguments. In Demirkaya's20 study conducted with elementary school students, it is also noteworthy that emotions arising from religious reasons were expressed. As seen in these studies, it is seen that students inferred that the earthquake was caused by the lack of faith in people or that the earthquake taught people a lesson. The findings of our study are in parallel with these studies.

Apart from these categories, it is seen that PTR students produced various metaphors related to other situations. It is seen that students express the thoughts that come to the fore in their minds depending on their observations and experiences. These feelings generally evoke negative situations. The feeling of having experienced the earthquake created a more result-oriented association. If the students had not experienced the earthquake, perhaps it could be seen that they produced metaphors that could have positive contributions on causality. In this respect, it may be recommended to conduct studies in which the thoughts of students who have not experienced the earthquake are expressed.

Limitations

Although understanding the perceptions of PTR students, who can play an important role in disasters, about earthquakes will make significant contributions to the literature, this study has some limitations. The most important limitation of this study is that only PTR students were addressed. In this respect, determining the metaphorical perceptions of students studying in different departments towards the concept of earthquake can be the subject of future research. In addition to metaphor studies, more comprehensive studies using other qualitative research methods can be recommended to determine students' thoughts about earthquake in more detail.

Conclusion

In this study, the metaphors produced by PTR students for the concept of 'earthquake' were determined and the emotions they felt and perceived in this regard were determined. The data obtained can be used to support students psychosocially. Since the effect of the earthquake may continue for a while on the educational life and psychosocial status of the students, it is important to support them by establishing a professional team. It is seen from the metaphors produced by the students that the earthquake had more negative effects on their minds. The fact that the feelings of helplessness and death are expressed at the forefront may be an indicator of how difficult a process they have gone through. An evaluation of not only PTR students but also all students living in the earthquake zone may contribute to the implementation of a holistic approach. Including a course on 'earthquake' in particular and 'disaster' in general in the curriculum program may be beneficial in terms of the contribution of PTR students in possible earthquakes that may occur in the future. Because physiotherapists constitute one of the most important pillars of rehabilitation in these disasters.

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