

## **Investigation of Volleyball Players' Metaphorical Perceptions Regarding the 2023 Kahramanmaraş Centered Earthquakes in Turkey: The Sultan's League Example**

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### **Abstract**

This research aims to examine the metaphorical perceptions of Turkish players in the Turkish Sultans League regarding the 2023 Kahramanmaraş-centered earthquakes. The study group of the research consists of 40 players. The method of the research is the phenomenology pattern, one of the qualitative research method patterns. Participants said, "An earthquake is like.....". "Because ....." research data were collected according to their answers. The collected data were analyzed by inductive content analysis. As a result of the research, it was found that the participants produced 16 different metaphors regarding the concept of "earthquake". Metaphors are grouped under 4 categories according to their common features and reasons for use. Categories; They are named "Religion", "Sociology", "Psychology" and "Philosophy". It was concluded that the participants mostly produced the metaphors of apocalypse (f=7), nightmare (f=6), unexpected accident (f=4), helplessness (f=4) and death (f=14). It is thought that the data obtained will help in planning disaster education studies by the level of players and thus in organizing disaster education studies to be given to players effectively. In addition, learning the volleyball players' perspectives on the earthquake phenomenon is important for the authorities in terms of knowing their reasons for making sense of the world. It is also expected that the research will be an example and a pioneer for similar studies.

**Keywords:** Earthquake Perception, Phenomenology, Metaphor, Volleyball, Volleyball Players.

## Introduction

Disaster is an event that leaves local resources inadequate, require surgent assistance at a global level, is unpredictable and often develops suddenly, and causes great damage, destruction and human suffering (Hoyois et al., 2007). Disasters such as earthquakes, floods, landslides, volcanic ructions and storms that occur in nature harm people and societies. (Zhou et al., 2018). While humans try to influence the natural environment with the help of technology, they are also influenced by the natural environment. One of the biggest problems that humans face in the natural environment is natural disasters.

Among natural disasters, earthquakes cause the most damage to people and societies. (Rij, 2016). Earthquakes are a natural disaster that should be evaluated not only as the movement of the earth, but also in the context of human relations with space (Afacan & I. Afacan, 2023). The inability to predict the earthquake precisely, the feeling of helplessness experienced during the earthquake, and the problems encountered after the earthquake have negative effects on people.

The geography of Anatolia has a geological structure that is fragmented by fault fractures (Şahin & Sipahioğlu, 2002). In Turkey, depending on the density of fault lines, the earthquake risk is higher in residential areas located on the Northern Anatolia, Western Anatolia and Eastern Anatolia fault lines (Özkul & Karaman, 2007). For this reason, Turkey is a country that is always in danger of earthquakes. Frequent earthquakes are proof of this situation. Among the natural disasters in Turkey, earthquakes are the natural event that causes the most loss of life and property (Afad, 2018). For example, on the Eastern Anatolian fault line, 1513 Pazarcık, 1822 Maras, 1866 Karliova, 1872 Antakya, 1874 Gezin, 1875 Sivrice, 1893 Malatya-Celikhan, 1905 Pütürge, 1964 Malatya, 1965 Karliova, 1966 Varto, 1968 Bingöl-Elazığ, 1971 Bingöl, Natural events such as the 1971 Lice, 1977 Palu, 1986 Malatya Sliders, 1998 Karliova, 2003 Bingöl earthquakes have occurred (İmamoğlu & Çetin, 2007). Public earthquake anxiety has also increased due to the loss of life and property in these earthquakes.

## Kahramanmaraş centered earthquakes

Earthquakes occurred in Turkey on February 6, 2023, with the epicenter in Pazarcık and Elbistan town of Kahramanmaraş. This earthquake consists of two consecutive earthquakes, nine hours apart. First, there was a 7.7 magnitude earthquake that lasted 65 seconds at 04:17. Then, at 13:27, there was another earthquake with a magnitude of 7.6 that lasted 45 seconds. In addition to Kahramanmaraş, Gaziantep, Şanlıurfa, Adıyaman, Malatya, Elazığ, Diyarbakır, Kilis, Adana and Hatay provinces were negatively affected by these earthquakes. Among these provinces, the province with the most damage was Hatay. This earthquake took its place in history because there was no other earthquake that affected such a wide area in the history of the Republic of Turkey and Anatolia. For the earthquakes centered in Kahramanmaraş, large organizations were organized in Turkey and around the world, and international rescue efforts were carried out. The World Health Organization evaluated these earthquakes as a "level three emergency". The Republic of Turkey introduced a level four alert, an alert level that includes international assistance, and declared a state of emergency in the region affected by the earthquakes for three months. 13.5 million people living in an area of approximately 110,000 square kilometers were damaged by the earthquakes around 50,000 people died. Around 385 buildings were destroyed and around 150 thousand people were evacuated from the earthquake area. The material damage is estimated to be over 100 billion dollars. After these earthquakes, according to the data announced by the Ministry of Culture and Tourism of the Republic of Turkey, a total of 47 tourism facilities collapsed in the region, including 21 Ministry buildings and 26 municipal buildings.

Since earthquake is a natural disaster that negatively affects people and societies, it deeply affects human consciousness both when it occurs and afterwards. The occurrence of an earthquake and the stress it causes cannot be completely eliminated. However, by providing earthquake training, people can be provided with the knowledge and skills necessary to recognize the structure of the earth's crust, to be informed about the formation of earthquakes, and to minimize the damages that may occur after the earthquake (Öcal, 2005). For example, according to a study investigating earthquake perception in Turkish sports newspapers, the comments of celebrities and authorities that constitute the content values of the newspapers were examined. According to this study, the fears experienced by sports people who experienced the 2023 Kahramanmaraş-centered earthquakes, the names of those who lost their lives and property, and their psychosocial conditions are remarkable (Afacan & I. Afacan, 2023). According to a study investigating the earthquake knowledge and sustainable earthquake awareness levels of students of the Faculty of Sports Sciences, it was determined that male participants had higher levels of knowledge about the durability of buildings such as homes and schools where they live and how to behave in times of danger than female participants (Budak & Kandil, 2023). In this context, considering that the majority of the female volleyball players participating in the study, 70%, have an undergraduate education level, the importance of conducting research that will address the connections of female athletes to earthquakes and the reasons for these connections becomes evident. Perceptions about earthquakes can be changed in a positive way thanks to the earthquake training given under the title of disaster education. In this regard, disaster education activities of clubs, as well as schools, should come to the fore. Therefore, it is necessary to examine the earthquake-related knowledge levels, perceptions and opinions of players in clubs, just like students in schools.

When the literature was examined, no study was found on the earthquake perception of volleyball players. One of the ways to examine the earthquake perceptions of players who can have an impact on society is through metaphors. Metaphors are one of the mental tools that shape and control the individual's thinking structures and thoughts for the formation of concepts (Hogler et al., 2008). Thanks to these mental tools, the individual reconciles concepts and objects (Arslan & Bayrakçı, 2006). In this respect, metaphors are mental designs that allow individuals to express their thoughts more easily (Shaw & Mahlios, 2011). Therefore, in this study, the perceptions of Turkish women volleyball players playing in the Turkish Sultans League regarding the earthquake were tried to be determined with the help of metaphors.

As a result, investigating players' metaphorical perceptions about earthquakes can help in planning processes related to earthquake training for players. Because if earthquake training studies are organized in accordance with the perception levels of the players, the efficiency of these studies can be increased. Accordingly, it is expected that the data obtained from this and similar studies will contribute to making earthquake education studies more efficient by organizing them in accordance with the perception patterns of players. In addition, investigating the metaphorical perceptions of players regarding earthquakes contains important clues for the authorities in terms of learning their emotional states and getting to know their inner world in the face of such natural disasters.

In this regard, answers were sought to the sub-problems given below.

1. What are the metaphors of Turkish volleyball players about the earthquake?
2. Under which categories can the metaphors of Turkish volleyball players related to the concept of earthquakes be conceptualized in the context of common features?

## Materials and Method

### Research Model

Phenomenology pattern, a qualitative research method, was used in this research examining the metaphorical perceptions of Turkish volleyball players playing in the Sultans League regarding the 2023 Kahramanmaraş Centered Earthquakes. Phenomenology pattern is a pattern used to investigate phenomena that are not known in depth (Creswell, 2007). In this pattern, it is tried to interpret there search phenomenon from the perspectives of the person or people who will reflect the phenomenon (Patton, 2002). The study has obtained permission from Aydın Adnan Menderes University Rectorate Social and Humanities Research Ethics Committee (2023/31906847/050.04.04-08.291).

### Participants

Turkish women volleyball players who played in various teams in the Sultans League in the 2023-2024 season constitute the limitations of the research. Participants were selected according to the maximum variation sampling method from the purposive sampling method. In the maximum diversity sampling method, there is an idea to conduct research on similar individuals in itself (Büyüköztürk et al., 2016). In this context, volunteer Turkish volleyball players who did not vary in terms of gender and league level were included in the study. The demographic characteristics of the 40 participants in the study are shown in Table 1.

**Table 1.** Demographic information for participants

Variables	Demographic features	F	%
Age	18-22	10	25,00
	23-27	13	32,50
	28-32	9	22,50
	33-35	8	20,00
Education status	High School	12	30,00
	University	28	70,00
Marital status	Single	35	87,50
	Married	5	12,50
Position played	Setter	6	15,00
	Middle Player	11	27,50
	Spiker	9	22,50
	Setter's Cross	8	20,00
	Libero	6	15,00

When table 1 is examined, it is seen that the age distribution of the participants is balanced. In this balance, the 23-27 age range ranks first with 32.50%. When we look at the graduation status, the number of players who are undergraduate graduates (70%) is higher. Considering the information regarding marital status, the majority of the participants are single with 87.50%. Inters of the positions played by the participants, middle players (27.50%) come first.

### Data Collection

In the study, Turkish volleyball players' metaphors regarding earthquakes were collected using an open-ended survey form consisting of two parts. In the first part, questions were asked regarding the personal information of the participants. In the second part, the participants were asked to make the analogy "An earthquake is like ....." in order to reveal their metaphors about earthquakes. And then, "Because, ....." it is expected that they will make a statement starting with. Here, the aim was to reveal the relationship between the

metaphor and its source with the expression "like" and to explain the reason for the analogy with the expression "because" (Tok, 2018). Before implementation, a sample study was conducted with volleyball players on the concept of "earthquake". Then, the application was started and volleyball players were asked to fillout the survey form.

### Data Analysis

In this study, inductive content analysis was used in the analysis of the data. The data collected in the content analysis is organized and presented in categories (Yıldırım & Şimşek, 2011). This type of presentation; This includes sifting and numbering, coding, conducting validity and reliability studies, and interpreting the data. In this research, the data was analyzed through similar stages.

**Sifting and Enumerating Findings:** At this stage, it was examined whether the answers given were suitable for the purpose of the research. It was decided that the answers of the 40 participants in the study were suitable for the purpose of the research. In this context, the answer papers of the participants were evaluated and the numbers P1, P2, P3, ..., P40 were given to the 40 answer papers.

**Coding Findings:** At this stage, the metaphors that were decided to be evaluated were numbered starting from one. As a result of this process, four different codes were determined: sociology, psychology, religion and philosophy. The codes and metaphors determined by the researchers were listed and the frequency values of each metaphor were written.

**To Provide Reliability with Validity:** In the study, credibility, transferability, consistency and confirmability strategies were used for validity and reliability (Shenton, 2004). For credibility, the survey form developed by the researchers was presented to two professionals. Inline with Professional opinions, it was decided to use the concept of earthquake in metaphor form. Purposive sampling method was used in the study for transfer ability. For consistency, the data obtained were evaluated by two researchers, first separately and then together. As a result of all these studies, categories and codes were determined.

**Interpreting the Findings:** In the data analysis, volleyball players' earthquake-related metaphors were categorized and their justified expressions were stated. These metaphors and their categories were interpreted by presenting them in figures and tables.

### Findings

#### Volleyball Players' Metaphors Regarding the Concept of "Earthquake"

It was found that the volleyball players participating in the research produced a total of 15 metaphors regarding the concept of "earthquake". The metaphors produced and the frequency values of the metaphors are shown in Table 2.

**Table 2.** Metaphors produced by participants for the concept of earthquake

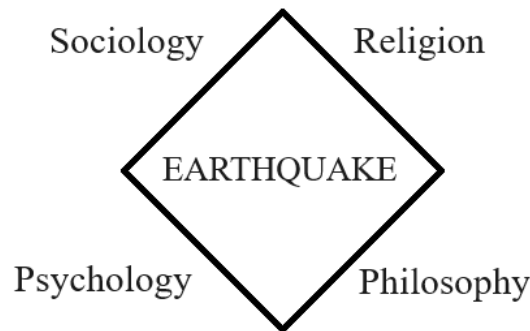
Metapfor	F
Apocalypse	7
Nightmare	6
An Unexpected Accident	4
Despair	4
Death	4
Enlightenment	3
The Destruction of Dreams	2
Heartache	2
Darkness	2

<b>Horror Movie</b>	1
<b>An End</b>	1
<b>Education System</b>	1
<b>Our Future</b>	1
<b>Graveyard</b>	1
<b>Staying in Need</b>	1
<b>TOTAL</b>	40

In Table 2, the metaphors produced by volleyball players regarding the earthquake are arranged according to their frequency of use. It was found that the most used metaphors of the participants were apocalypse (f=7), nightmare (f=6), an unexpected accident (f=4), despair (f=4), death (f=4) and enlightenment (f=3).

### Categorization of Metaphors Related to the Concept of Earthquake

The 15 metaphors produced by volleyball players about earthquakes were grouped under four categories in terms of their common features and reasons for use. Categories and subcategories are given in Figure 1.



**Figure 1.** Subcategories of earthquake metaphors

In Figure 1, it is seen that the metaphors produced by volleyball players related to the earthquake consist of four categories as “Religion”, “Sociology”, “Psychology” and “Philosophy”. Metaphors and explanation examples in these categories were presented in tables.

Metaphors and explanation examples belonging to the “Religion” category of volleyball players are given in Table 3.

**Table 3.** Volleyball players' metaphors and explanation examples belonging to the “Religion” category

Category	Metaphor	Description Examples
<b>Religion</b>	Death	It makes one feel coldness and fear (P11)
	Apocalypse	The horror rate is very high (P28)
	Graveyard	Buildings collapse when the foundation is not strong (P18)

When the participants' explanations are examined, it is seen that they explain the earthquake by comparing it to some basic concepts of religion.

Volleyball players' metaphors and explanation examples belonging to the "Philosophy" category are given in Table 4.

**Table 4.** Volleyball players' metaphors and explanation examples belonging to the "Philosophy" category

Category	Metaphor	Description Examples
Philosophy	Enlightenment	Reminds you of what you have and the value of every moment (P4)
	An end	You think everything is over and coming to an end (P24)
	Our Future	There is no telling when evil will come (P31)

In Table 4, there are 3 metaphors under the "Philosophy" category. When the participants' statements are examined, it is seen that the earthquake gave a new and different perspective from a philosophical perspective.

Volleyball players' metaphors and explanation examples belonging to the "Sociology" category are given in Table 5.

**Table 5.** Volleyball players' metaphors and explanation examples belonging to the "Sociology" category

Category	Metaphor	Description Examples
Sociology	Education system	Without a solid foundation, our future will collapse (P35)
	Needy of Others	Suddenly being in need of others (P14)
	Unexpected Accident	Everyone is unprepared and has not taken precautions (P40)

In Table 5, there are 3 metaphors under the "Sociology" category. When the participants' statements are examined, it is seen that the earthquake is sociologically linked to the words education, others and everyone.

Volleyball players' metaphors and explanation examples belonging to the "Psychology" category are given in Table 6.

**Table 6.** Volleyball players' metaphors and explanation examples belonging to the "Psychology" category

Category	Metaphor	Description Examples
Psychology	Despair	There is nothing to be done to buildings during an earthquake (P7)
	Nightmare	A bad dream that lasts for a long time (P10)
	Horror movie	At the end of the scenario, everything ends badly (P34)
	The Destruction of Dreams	Disappearance of plans and thoughts (P9)
	Darkness	Without light you don't know where to go (P38)
	Heartache	It hurts the heart when others die like this (P17)

Table 6 includes 6 metaphors under the "Psychology" category. When these statements of the participants are examined, it is seen that the earthquake is a phenomenon that creates psychological anxiety, concern and fear.

## Discussion

Based on the findings of this study, which was conducted to determine the metaphorical perceptions of female volleyball players playing in the Sultans League regarding the earthquakes centered in Kahramanmaraş in Turkey in 2023, the following conclusions were reached.

As a result of the research, it was concluded that the players produced 15 different metaphors. Metaphors were grouped under four categories according to their common features and reasons for use. These categories are; Religion, Philosophy, Sociology and Psychology. The most repeated metaphors by the players were; It was concluded that they were metaphors of apocalypse, nightmare, an unexpected accident, helplessness and death. According to these results, it is seen as an important result that volleyball players' earthquake-related metaphors include the negative and destructive aspects of the earthquake. Since there is no research investigating athletes' earthquake perceptions in Turkey, the destructive and negative aspects of volleyball players' earthquake-related metaphors revealed in the research need to be compared with other fields. For example, the studies conducted by Aksoy (2013), Karakuş (2013) and Değirmenci (2019) on earthquake metaphors of students in Turkey are similar to the study in which students revealed the negative and destructive aspects of earthquakes. Because players are also students in the field of sports, this type of comparison can be considered correct. In another study investigating the earthquake perception of religious officials in Turkey, it was determined that some religious officials evaluated earthquakes as a divine punishment or warning by taking the example of destroyed tribes as a reference from the Quran (Batır & İnce, 2023). This situation is also similar to the study. It is normal for athletes and religious officials to emphasize the destructive and negative aspects of the earthquake in a similar way because they live in Turkey and are raised with the same cultural values. According to a study investigating the post-earthquake success motivation levels of professional athletes after the Kahramanmaraş earthquakes, athletes' motivation to approach success can be used as a source of motivation to overcome the effects of the earthquake event and return to normal life (Özkan et al., 2023). Another study conducted on Turkish Cypriot athletes who lost their lives in the earthquakes centered in Kahramanmaraş showed that news about the earthquake was generally followed on social media, that instant and eyewitness posts gained importance, and that trust in the mainstream media regarding accurate reporting was low (Öze, 2024). According to another study concerning the negative and destructive aspects of the earthquake on people, it has been found that recreational sports performed after the disaster help residents of devastated areas to cope with stress after the disaster and to develop a sense of belonging to a place, to cope with stress after the disaster (Thorpe, 2015). Volleyball players participating in the research produced 3 metaphors in the religion category. In this category, earthquakes are likened to frightening concepts such as "death, apocalypse and graveyard". It is possible to assess this situation as a connection has been established with people's feelings of helplessness, fear, and anxiety during and after the earthquake. At the same time, people receive constant support from God, thinking that God is always with them during disasters such as earthquakes that make them feel helpless. The fear and anxiety felt by a person who constantly thinks about God with herself / himself will decrease, and she will complain less about the helpless situation she finds herself / himself in. Research also supports this idea (Pargament, 1996). Research has shown that 45% of people try to overcome the problem by performing some religious behaviors during stress fultimes, and 78% of people turn to religious values in the face of a negative situation such as illness, death, orearthquake (Thompson & Vardaman, 1997). For example, in a study, it was determined that the importance given to religion by parents who lost their baby in an earthquake supported the parents and at the same time made it easier for them to make sense of the baby's death (McIntosh et al., 1993). Another example is a study investigating religious services during the February 6 Kahramanmaraş Earthquakes. According to this study, it was observed that the spiritual counseling and guidance process after the earthquake progressed as a consolation process in which asking how people were doing, chatting, reading the Quran, and praying were prominent (İnce, Temiz & Erdinç, 2023). Accordingto a study, 82% of those who



experienced the Marmara earthquake in Turkey on August 17, 1999, stated that it was as if the end of civilization as we know it (Kula, 2000). In this context, it seems meaningful that volleyball players also explain the earthquake with the concept of apocalypse.

Volleyball players participating in the research produced 3 metaphors in the philosophy category. In this category, earthquakes were likened to cognitively based concepts such as “enlightenment, an end, and a future.” The intellectual content of the concepts expressed in this category can be interpreted as the fact that for volleyball players, the earthquake caused people to start questioning their existence after a great fear and anxiety.

People need to be enlightened about natural disasters that seriously affect people, such as earthquakes. On the contrary, many people, especially in developed or developing countries, are unaware and uninformed about such situations (Thomas et al., 1999). However, the earthquake that occurred in Lisbon in 1755 and caused the death of thousands of people went far beyond being a natural disaster and the real earthquake took place in thoughts. For example, Voltaire wrote his “Poem on the Lisbon Disaster”, full of pessimism and unhappiness, a few weeks after the disaster (Voltaire, 2020). In this poem, Voltaire questioned existence due to the Lisbon earthquake.

J.J. Rousseau wrote a letter to Voltaire in 1756 after reading his "Poem on the Lisbon Disaster". In this letter, he discussed the evil that came with the earthquake by removing God from the event. He suggested that the source of the physical evil and pain caused by the earthquake was man's own actions. And he explained the severe consequences of the disaster by unregulated urbanization and the poverty of the people (Roosbroeck, 1923). Based on the Lisbon earthquake, Immanuel Kant explains the relationship between natural events and the power of God with the view that God has no influence on the necessary laws of nature. In his work titled "The Only Possible Argument in Support of a Demonstration of the Existence of God", Kant stated that an earthquake is only a natural event and that metaphysical inferences should not be made based on the phenomenon. In this process, Kant especially tested the validity of the rationalist tradition's proofs of God and tried to determine what the method of metaphysics should be (Gardner, 2003). Therefore, the earthquake phenomenon brings up discussions about the enlightenment of people about the future, the end of this world, and the perfection of God throughout human history.

Volleyball players participating in the research produced 3 metaphors in the sociology category. In this category, earthquakes are expressed with socially based concepts such as “education system, being in need of others and unexpected accident”. An earthquake can be likened to a system created by people, such as education. This situation can be explained by comparing it to social situations such as being dependent on others after an earthquake or experiencing an unexpected accident due to someone else's mistake. A study conducted in Japan can be given as an example of comparing an earthquake to a system created by people, such as education. According to this research, sports managers about the usage system of sports facilities after the earthquake; They stated that after the disaster, sports facilities should be used for emergency response, emergency action, emergency shelter and should be built to serve in this direction (Amano, 2012). Despite the earthquakes in China before the Beijing 2008 Summer Olympic Games, 31 competition and 43 training sports facilities were built earthquake-resistant. In particular, the construction of the Beijing National Stadium was designed so that its primary structure would remain elastic in the event of a severe earthquake. In addition to earthquake safety, the use of sports facilities after other natural disasters has also been planned (Subramanian, 2008). Therefore, in addition to post-earthquake usage

strategies of sports facilities, their technical planning before their construction is also important. This situation is also linked to the quality of the education system.

Volleyball players participating in the research produced 6 metaphors in the Psychology category. In this category, earthquakes were based on emotion-based concepts such as “helplessness, nightmare, horromovie, destruction of dreams, darkness and heart ache”. The reason why there are more metaphors in this category than others is that an explosion of emotions occurs when a major natural disaster such as an earthquake suddenly occurs. According to a study, the psychological effects of disasters can be seen more severely in special groups such as children, women and the elderly (Makwana, 2019). Therefore, natural disasters such as earthquakes, due to their devastating effects, cause various mood disorders such as post-traumatic stress disorder, anxiety, phobias, and depression in survivors (Alipour & Ahmadi, 2020). Especially in the first few days of the disaster, a temporary emotional shock may be experienced due to the problems that may occur. Feelings of fear, anger, guilt, shame, helplessness and hopelessness may be felt, or one may remain motionless without feeling anything due to the effect of shock (Hodgkinson & Stewart, 1991).

Psychosocial support practices are frequently used to reduce the traumatic effects of earthquakes (Xu & She, 2012). It is estimated that while providing these trainings, the players should be prepared according to their perception level and thus the trainings will be more effective and permanent. In addition, this research data can enable people who have influence and authority about athletes to comprehensively evaluate their feelings and thoughts about the earthquake. Because Turkey is an earthquake country and training on natural disasters should be given to athletes by their clubs. It is estimated that while providing this education, the players should be prepared according to their perception level and thus the education will be more effective and permanent. For example, according to the results of a study conducted on students of the Faculty of Sports Sciences, it was understood that most undergraduate students were aware of the effects and consequences of earthquakes, but university education was not sufficient during the preparation phase of the earthquake (Budak & Kandil, 2023). The fact that a large majority of the female volleyball players participating in this study, 70%, had an undergraduate education also supports the importance of earthquake education for athletes.

With this study, metaphors were determined by which female volleyball players playing in the Turkish Sultans League could Express their thoughts and feelings about the 2023 Kahramanmaraş-centered earthquakes. Thus, the perception levels related to the earthquake were determined. With this data obtained, disaster education studies to be carried out in sports clubs can be planned according to the athlete level.

There are no studies in the literature regarding Turkish volleyball players. The majority of people in developing countries are unaware and uninformed about earthquakes and other natural disasters (Thomas et al., 1999). Therefore, since Turkey is also a developing country, there are no studies in the literature regarding Turkish volleyball players. This creates an expectation that the research will be an example and a pioneer for similar studies.

## **Conclusion**

This research, which aims to examine volleyball players' metaphorical perceptions of earthquakes, is the first research on the subject conducted in Turkey. Therefore, it has some limitations. First of all, this study is limited to 40 female athletes playing volleyball in the Sultans League in Turkey. Secondly, this study is related to the earthquakes centered in Kahramanmaraş in 2023. Therefore, research should continue on the sporting dimensions of a natural disaster such as an earthquake that negatively affects people and societies and is

always likely to happen. Therefore, this study can be an example for similar studies to be conducted in the future. Because earthquake is an important phenomenon not only for volleyball players but also for athletes in all sports branches, earthquake perceptions of other athletes should also be determined. In the direction of these perceptions, earthquake-related training in sports environments will be more conscious. Studies to be conducted with male athletes as well as female athletes can provide more detailed information about their earthquake perceptions. In addition to all these, similar studies to be conducted in other countries may provide the opportunity to make comparisons between countries and cultures.

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