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Comparison of Kick Boxers Participating in the Turkey Inter-University Championship According to their Multiple Intelligence Levels

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Abstract
The purpose of this study is to compare the multiple intelligence level of athletes participating in Inter-University Kick Boxing Championships in Turkey according to different variables. The universe of the study is created by 650 athletes from 65 universities that attended to the Inter-University Kick-Boxing Championship in Turkey (between 06-11 March 2018). And the sample of the study is 87 athletes who voluntarily accepted to participate in the study. In the study, "Self-Assessment Inventory in Multiple Intelligence Areas," which was developed by Howard Gardner, translated into Turkish by Saban (2002) and whose validity and reliability (α = 0.93) were made, was used as the data collection tool in the study. SPSS 20 package program was used to analyze the data. The normality of the distribution was examined using the Shapiro Wilk test. It was observed that the available data had normal distribution. In the analysis of the data, descriptive statistical analysis, one-way analysis of variance (ANOVA) that compares the multiple intelligence levels of the athletes according to the universities they attend, the Tukey test, and the Independent sample t test that compares the multiple intelligence levels of the athletes according to the age variable were used. At the end of the study, depending on the age variable, Linguistic intelligence ($p = .663$; $p < 0.05$), Logical intelligence ($p = .724$; $p < 0.05$), Visual intelligence ($p = 0.900$; $p < 0.05$), Musical intelligence ($p = .815$; $p < 0.05$), Nature intelligence ($p = .450$; $p < 0.05$), Interpersonal intelligence ($p = .713$; $p < 0.05$), Kinesthetic intelligence ($p = .548$; $p < 0.05$), Intrinsic intelligence ($p = .799$; $p < 0.05$) no significant difference was found between the sub-dimension levels and the ages of the athletes.

Keywords: Multiple Intelligences, University Student, Kick boxing

INTRODUCTION

For many years, studies have been carried out on what the meaning of intelligence is. During these studies, many different definitions were made by the researchers. Some psychologists have expressed different views on the definition of intelligence. Some believe that intelligence consists of many special abilities. Galton, who was trying to measure intelligence for the first time, treated intelligence as structuring and using information (Bümen, 2011). According to Binet, the concept of intelligence is reasoning, good judgment and self-criticism (Toker, Kuzgun, Cebe). First theories about the basic nature of intelligence, learning capacity; dealt with three main

points: the total knowledge gained by the individual and the ability to successfully adapt to new situations and the environment (Senemoğlu, 2007). *"Intelligence is a general mind force. This power is equally manifested in any field of man. It is also claimed that intelligence is independent from environmental conditions. However, recent studies have revealed that environmental conditions affect intelligence to some extent. Until the theory of multiple intelligences emerged, many views on intelligence were put forward in the history of education. For many years, the prevailing opinion was that people had a certain intelligence field and continued their lives with this field of intelligence; Today, the boundaries of intelligence have begun to be determined again with the researches. All these developments have taken the history of world education to a different point, and have made it compulsory to re-evaluate human intelligence in the light of new developments. Over time, the view that intelligence consists of many factors has prevailed. Although it was accepted that intelligence consists of many factors, it continued to be determined by a singular measurement as a unique combination of these factors. During this process, Gardner approached intelligence differently and stated that intelligence should not be considered in one dimension, but in many different dimensions. Based on this understanding, the theory of multiple intelligences was developed. According to the multiple intelligence theory, a person has different areas of intelligence such as verbal intelligence, mathematical intelligence, social intelligence, musical intelligence, visual intelligence, physical intelligence, intrapersonal intelligence, and naturalistic intelligence. Gardner stated that in the development of intelligence domains, besides inheritance, environmental conditions can also play a supportive or preventive role*."(As cited in Çalı & Kangalgil, 2020; Elik ve Tazegül, 2018).

Multiple Intelligence Theory was defined by Gardner in 1983 (Köksal, 2006). This theory is an approach that opposes the IQ intelligence perspective of the individual, claims that intelligence is multi-part, and emphasizes that individuals come to the learning environment with different learning styles (Gardner, 1993). According to Gardner, intelligence; It is the ability to present products and solve problems that find value in one or more cultures (Gardner, 1993).

1. **Linguistic Intelligence:** This type of intelligence includes the ability to use and produce language effectively. Individuals with this type of intelligence are the best people in areas of use such as thinking and expressing with words, evaluating complex meanings in language, explaining and speaking on a topic (Armstrong, 2003: 13; Armstrong, 2009: 6; Moran, Kornhaber, & Gardner. , 2006: 27).

2. **Kinesthetic Intelligence**: Individuals who develop a physical intelligence type control their body movements well and can use their brain and body coordination effectively. This includes skills such as balance, strength, flexibility, speed, manual skill, and coordination (Babacan & Dilci, 2012; Nolen, 2003: 117).

3. **Visual Intelligence**. Individuals with developed visual intelligence have the ability to fully perceive visual elements and to transform things into different forms. The skills of thinking of pictures, images, shapes and lines, perception and reasoning of three-dimensional objects are developed.

4. **Musical Intelligence**: Individuals who are dominant in this field of intelligence are sensitive to the rhythm, melody tuning and timbre in music. In addition, they have the skills to voice, change, separate, and produce musical structures and to be successful in these issues (Armstrong, 2003: 13; Armstrong, 2009: 7; Moran, Kornhaber and Gardner, 2006: 27; Gardner, 1999: 42; Nolen, 2003: 116).

5. **Logical Intelligence**: Individuals who are dominant in this field of intelligence use numbers very well. Individuals with this type of intelligence have high skills of thinking with numbers, calculating, making conclusions, establishing logical relationships, generating hypotheses, problem solving, critical thinking, meeting abstract symbols such as numbers, geometric shapes, and establishing relationships between parts of knowledge (Armstrong, 2003: 13. Armstrong, 2009: 6; Moran, Kornhaber and Gardner, 2006: 27; Gardner, 1999: 42).

6. **Intrinsic Intelligence:** It includes recognizing the characteristics of the individual such as his / her habits, potential, tastes, abilities, and ambitions, symbolizing the experiences in his/her inner world and

helping others with what he/she gains from this field (Armstrong, 2003: 13). Individuals who strengthen the field of intelligence will help them plan and manage their own learning and enable them to better understand the areas where they expect success (Moran, Kornhaber, & Gardner, 2006: 27). People such as painters, therapists, and shamans are included in this intelligence field (Armstrong, 2003: 13; Armstrong, 2009: 7; Moran, Kornhaber, & Gardner, 2006: 27).

7. **Interpersonal Intelligence:** Individuals with abilities such as being aware of the characteristics of individuals and seeing the differences between them and guiding for the benefit of others in this direction are included in this intelligence field. In other words, they have the ability to perceive and discriminate on people's emotions, aspirations, intentions and moods. They are sensitive to facial expressions, voices and gestures. They are adept at distinguishing these characteristics that are different to most people and using them for their own benefit. Nolen (2003: 118) states that individuals who are dominant in this field of intelligence prefer learning through cooperative learning, observation and experiences more frequently due to their characteristics. Professional areas such as teachers, association founders, administrators, politicians are included in this group (Armstrong, 2003: 13; Armstrong, 2009: 7; Moran, Kornhaber, & Gardner, 2006: 27).

8. **Natural Intelligence :** People who are dominant in the field of natural intelligence are sensitive individuals who create a consciousness about nature and the environment (Green et al., 2005: 355). This area of intelligence includes the ability of the individual to recognize the animal and plant community around him, take care of them, or communicate with them in a way. It is the ability to recognize all living things in nature, research and reflect on the creation of living things (Armstrong, 2003: 13; Armstrong, 2009: 7; Moran, Kornhaber, & Gardner, 2006: 27; Gardner, 1999: 48).

9. **Existential Intelligence:** Existential intelligence is not a field of intelligence peculiar to individuals who have positive or negative opinions about the end of life, who form moral values, on the contrary, it is a field of intelligence that can be developed by each individual who can think skillfully and deeply on certain issues (Gardner 1999: 69). Nevertheless, among the dominant individuals in this field of intelligence, there are philosophers, religious leaders and statesmen who have left a lot of marks (Gardner, 2006: 20). This area of intelligence includes the ability to think over questions and phenomena beyond emotional knowledge (Moran, Kornhaber, & Gardner, 2006: 27).

The aim of this study is to compare, kick boxers participating in the Inter-University Championship in Turkey according to their multiple intelligence level with the above mentioned various variables

METHOD

In this study, the causal comparison model included in the quantitative research method was used.

Universe and Sample

The universe of the study is created by 650 athletes from 65 universities that attended to the Inter-University Kick-Boxing Championship in Turkey (between 06-11 March 2018). The sample of the study is 87 athletes who agreed to participate by random sampling method.

Data Collection Tools

Multiple Intelligence Scale

In order to determine the distribution levels in multiple intelligence areas, the "Self-Evaluation Inventory in Multiple Intelligence Areas," which was developed by Howard Gardner and translated into Turkish by Saban

(2002) and whose validity and reliability (α = 0.93) were made, was applied. The inventory consists of 80 questions. There are 8 intelligence theories and 10 questions from each intelligence theory. Linguistic intelligence, Logical intelligence, Visual intelligence, Musical intelligence, Natural intelligence, Interpersonal intelligence, Kinesthetic intelligence, Intrinsic intelligence questions were asked. The items are prepared according to the five-point grading system and 0 = "Not suitable for me at all"; 1 = "Less suitable for me"; 2 = "Partially suitable for me"; 3 = "Well suited to me"; 4 = "Perfect for me." The scores of each student candidate from eight parts of the inventory were collected in accordance with the rule and their total scores in intelligence areas were determined. According to these results, those with a total score of 33-40 in the areas of intelligence are very highly developed, those between 25-32 are highly developed, those between 17-24 are moderately developed, those between 9-16 are slightly developed, and those between 0-8 are not developed.

Data Analysis

SPSS 20 package program was used in the analysis of the data. In the analysis, the data set was primarily examined in terms of erroneous value, outlier and multiple correlations. It was observed that there was no data entered incorrectly during this process. The normality of the distribution was examined using the Shapiro Wilk test. It was observed that the available data had normal distribution. In the analysis of the data, descriptive statistical analysis, one-way analysis of variance (ANOVA) that compares the multiple intelligence levels of the athletes according to the universities they attend, the Tukey test, and the Independent sample t test that compares the multiple intelligence levels of the athletes according to the age variable were used. The significance level was taken as $p < .05$.

Results

Table 1: Frequency analysis showing the universities attended by the kickboxers in the sample.

	f	%
Sakarya University	13	14.9
Erciyes University	10	11.5
Yeditepe University	13	14.9
Bahçeşehir University	10	11.5
Özyeğin University	5	5.7
Bilgi University	8	9.2
19 Mayıs University	1	1.1
Aksaray University	3	3.4
Çukurova University	2	2.3
Marmara University	11	12.6
Total	87	100

When Table 1 is evaluated, 14.9% (n = 13) of the athletes were from Sakarya and 14.9% (n = 13) Yeditede Universities, 12.6% (n = 11) were from Akdeniz and 12.6% (n = 11) Marmara Universities, 11.5% (n = 10) from Erciyes and 11.5% (n = 10) from Bahçeşehir Universities, 9.2% (n = 8) from Bilgi, 5.7% of them (n = 5) were from Özyeğin University, 2.3% (n = 2) from Çukurova and 1.1% (n = 1) from 19 Mayıs University.

Table 2: One-way analysis of variance (ANOVA) and Tukey test results comparing the multiple intelligence levels of athletes according to their universities

Scale Sub-Dimensions	**Universities**	**N**	$\bar{x}$	**Level**	**ss**	**F**	***P***	**Tukey Difference**
Linguistic Intelligence	Yeditepe University(4)	13	22,54	medium	5.87	2.057	**0.044***	4<8 4<9 5<8 7<8
	Bahçeşehir University(5)	10	22.50	medium	4.60			
	Bilgi University(7)	8	19.38	medium	4.10			
	Aksaray University(8)	3	33.00	Very high	1.73			

	Çukurova University(9)	3	33.67	very high	2.52			7<9
	Erciyes University(3)	10	20.70	medium	6.17			
	Yeditepe University(4)	13	23.15	medium	6.15			3<8
	Bahçeşehir University(5)	10	20.90	medium	5.30			4<8
Logical Intelligence	Özyeğin University(6)	5	14.60	Low	3.36	2.759	**0.008**	5<8
	Bilgi University(7)	8	16.75	Low	3.11			6<8
	Aksaray University(8)	3	34.67	very high	1.53			7<8
	Marmara University(10)	11	18.82	medium	10.21			10<8
	Akdeniz University(1)	11	20.00	medium	10.50			
	Sakarya University(2)	13	25.38	High	8.87			1<8
	Erciyes University(3)	10	21.70	medium	8.21			1<9
	Yeditepe University(4)	13	24.38	medium	7.29			2>6
	Bahçeşehir University(5)	10	23.90	medium	4.28			3<8
Visual Intelligence	Özyeğin University(6)	5	16.20	Low	5.40	2.317	**0.023**	3<9
	Bilgi University(7)	8	19.25	medium	7.89			5<9
	Aksaray University(8)	3	33.00	very high	3.61			6<8
	Çukurova University(9)	3	34.33	very high	4.04			6<9
	Marmara University(10)	11	20.55	medium	8.90			7<8
								7<9
								10<9
	Akdeniz University(1)	11	20.00	medium	12.17			
	Sakarya University(2)	13	23.69	medium	7.86			2<9
	Erciyes University(3)	10	20.10	medium	7.16			2<9
	Yeditepe University(4)	13	24.92	medium	8.76			3<8
	Bahçeşehir University(5)	10	22.90	medium	5.17			3<8
Musical Intelligence	Özyeğin University(6)	5	15.80	Low	5.12	2.358	**0.021**	5<8
	Bilgi University(7)	8	19.50	medium	3.82			5<9
	Aksaray University(8)	3	34.33	very high	2.08			7<8
	Çukurova University(9)	3	33.33	very high	1.15			7<9
	Marmara University(10)	11	20.64	medium	8.70			10<9
	Bahçeşehir University(5)	10	19.70	medium	5.56			
Natural Intelligence	Bilgi University(7)	8	17.13	medium	5.77	2.312	**0.023**	5-8
	Aksaray University(8)	3	33.33	very high	2.89			7-8
	Akdeniz University(1)	11	23.00	medium	9.91			
	Sakarya University(2)	13	22.85	medium	8.84			1-9
	Erciyes University(3)	10	19.40	medium	8.54			2-9
	Yeditepe University(4)	13	24.15	medium	4.91			3-9
Kinesthetic Intelligence	Bahçeşehir University(5)	10	20.30	medium	7.42	2.522	**0.014**	4-9
	Bilgi University(7)	8	18.38	medium	5.34			5-8
	Aksaray University(8)	3	33.00	High	2.65			5-9
	Çukurova University(9)	3	37.00	very high	1.00			7-8
	Erciyes University(3)	10	19.40	medium	8.24			7-9
	Yeditepe University(4)	13	21.46	medium	6.42			
	Bahçeşehir University(5)	10	19.10	medium	7.02			3-9
Intrinsic Intelligence	Bilgi University(7)	8	18.63	medium	3.58	2.590	**0.012**	4-9
	Aksaray University(8)	3	36.00	very high	4.00			5-9
	Çukurova University(9)	3	32.33	High	2.08			7-9
	Marmara University(10)	11	17.09	medium	9.45			8-9
								10-8
								10-9
	Özyeğin University(6)	5	144.60		38.69			
Multiple Intelligence Schale	Bilgi University(7)	8	148.63		11.61	2.964	**0.004**	6-9
	Aksaray University(8)	3	267.67		12.10			7-8
								7-9

Theory	Çukurova University(9)	3	272.00	12.77
	Marmara University(10)	11	165.73	56.70

When Table 2 is evaluated, One Way ANOVA analysis was conducted in order to examine the difference between the multiple intelligence behavior levels of the athletes according to the status of the university variable. As a result of the analysis, it was determined that there was a statistically significant difference at the level of 95% in terms of the university variable they studied at the Multiple Intelligence Theory levels ($F_{(9-77)}$=2.964;p=.004;p<0.05). When the source of the meaningful difference is examined, there is a significant difference between Özyeğin, Bilgi Universities and Çukurova University, and between Bilgi University and Aksaray University. Based on the averages, the multiple intelligence levels of the athletes studying at Çukurova University **($\bar{x}$=272.00)**; It was determined that athletes studying at Özyeğin **($\bar{x}$=144.60)**, Bahçeşehir **($\bar{x}$=22.50),** Bilgi **($\bar{x}$=148.63)** and Aksaray Universities **($\bar{x}$=267.67)** had lower levels of linguistic intelligence than Çukurove University. According to these results, it can be said that the linguistic intelligence levels of the athletes studying at Çukurova University are very high.

It was determined that there is a statistically significant difference at the level of 95% in the logical intelligence sub-dimension of the athletes according to the university variable they studiedi. ($F_{(9-77)}$=2.759;p=.008;p<0.05). When the source of the meaningful difference is examined, there is a significant difference between Özyeğin University and Aksaray University, and between Bilgi University and Aksaray University. Based on the averages, the logical intelligence levels of the athletes studying at Aksaray University **($\bar{x}$=34.67)**; and studying at Özyeğin **($\bar{x}$=14.60)**, Bilgi **($\bar{x}$=16.75),** Erciyes **($\bar{x}$=20.30),** Yeditepe **($\bar{x}$=23.15),** Bahçeşehir **($\bar{x}$=20.90)** and Marmara Universities **($\bar{x}$=16.75)**, it can be said that the logical intelligence levels of the athletes studying at Aksaray University are very high.

It was determined that there is a statistically significant difference at the level of 95% in the visual intelligence sub-dimension of the athletes according to the university variable they have studied ($F_{(9-77)}$=2.317;p=.023;p<0.05). When the source of the meaningful difference is examined, there are significant difference between Akdeniz, Çukurova Universities and Aksaray University, between Sakarya University and Özyeğin University, between Erciyes University and Aksaray, Çukurova Universities, between Bahçeşehir University and Çukurova University, between Özyeğin University and Aksaray, Çukurova Universities, between Bilgi University and Aksaray, Çukurova Universities. There are significant differences between Çukurova University, Marmara University and Çukurova University.

Based on the averages, the visual intelligence levels of the athletes studying at Çukurova University **($\bar{x}$=34.33);** Aksaray **($\bar{x}$=33.00)**, Akdeniz **($\bar{x}$=20.00),** Erciyes **($\bar{x}$=21.70),** Bahçeşehir **($\bar{x}$=23.90),** Özyeğin **($\bar{x}$=16.20),** Bilgi **($\bar{x}$=19.25),** Marmara Universities **($\bar{x}$=20.55)**, it was determined that the in Çukurova University educated athletes have higher levels of visual intelligence. So it can be said that the visual intelligence levels of the athletes studying at Çukurova University are at a very high level.

It was determined that there is a statistically significant difference at the level of 95% in the musical intelligence sub-dimension of the athletes according to the university variable they have studied. ($F_{(9-77)}$=2.358;p=.021;p<0.05). When the source of the meaningful difference is examined, there is significant difference between Sakarya University and Çukurova, Aksaray Universities, between Erciyes University and Aksaray, Çukurova Universities, between Bahçeşehir University and Aksaray, Çukurova Universities, between Özyeğin University and Aksaray, Çukurova Universities, between Bilgi University and Aksaray, Çukurova Universities, and between Marmara University and Çukurova Univeristy. Based on the averages, the musical intelligence levels of the athletes studying at Aksaray University **($\bar{x}$=34.33);** Çukurova **($\bar{x}$=33.33),** Sakarya **($\bar{x}$=23.69),** Erciyes **($\bar{x}$=20.10),** Bahçeşehir **($\bar{x}$=22.90),** Özyeğin **($\bar{x}$=15.80),**Bilgi **($\bar{x}$=19.50),** Marmara Universities **($\bar{x}$=19.50),** it was determined that the in Aksaray University educated athletes have higher levels of musical intelligence. So it can be said that the musical intelligence levels of the athletes studying at Aksaray University are very high.

It was determined that there is a statistically significant difference at the level of 95% in the nature intelligence sub-dimension of the athletes according to the university variable they have studied. ($F_{(9-77)}$=2.312;p=.023;p<0.05). When the source of the meaningful difference is examined, there are differences between Bahçeşehir University and Aksaray University, and between Özyeğin University and Aksaray University. Based on the averages, the nature intelligence levels of the athletes studying at Aksaray University **($\bar{x}$=33.33);** It has been determined that Bahçeşehir **($\bar{x}$=19.70),** Bilgi **($\bar{x}$=17.13),** athletes studying at their universities have lower levels of musical intelligence. It has been determined that the athletes studying at Aksaray University have very high levels of natural intelligence. So it can be said that the nature intelligence levels of the athletes studying at Aksaray University are very high.

It was determined that there was no statistically significant difference in the interpersonal intelligence sub-dimension of the athletes according to the university variable they studied (p = .076; p> 0.05).

It was determined that there is a statistically significant difference at the level of 95% in the kinesthetic intelligence sub-dimension of the athletes according to the university variable they have studied. ($F_{(9-77)}$=2.522;p=.014;p<0.05). When the source of the meaningful difference was examined, significant differences were observed between Akdeniz, Sakarya, Erciyes, Yeditepe, Bahçeşehir Universities and Çukurova University, and between Bahçeşehir, Bilgi Universities and Aksaray University. Based on the averages, the kinesthetic intelligence levels of the athletes studying at Çukurova University **($\bar{x}$=37.00);** Akdeniz **($\bar{x}$=23.00),** Sakarya **($\bar{x}$=22.85),** Erciyes **($\bar{x}$=19.40),** Yeditepe **($\bar{x}$=24.15),** Bahçeşehir **($\bar{x}$=20.30),** Bilgi **($\bar{x}$=18.38),** it has been determined that sighted athletes that are in Çukurova Univeristy have higher levels of kinesthetic intelligence. So it has been determined that the kinesthetic intelligence levels of the athletes studying at Çukurova University are very high.

It was determined that there is a statistically significant difference at the level of 95% in the intrapersonal intelligence sub-dimension of the athletes according to the variant of the university they studied($F_{(9-77)}$=2.590;p=.012;p<0.05). Significant differences were determined between Sakarya, Yeditepe Universities and Çukurova University, between Bahçeşehir and Bilgi University and Çukurova University, between Marmara University and Aksaray and Çukurova Universities. Based on the averages, the intrapersonal intelligence levels of the athletes studying at Aksaray University**($\bar{x}$=36.00);** Çukurova **($\bar{x}$=32.33),** Erciyes **($\bar{x}$=19.40),** Yeditepe **($\bar{x}$=21.46),** Bahçeşehir **($\bar{x}$=19.10),** Bilgi **($\bar{x}$=18.63),** Marmara Universities **($\bar{x}$=17.09),** it was determined that sighted athletes have higher levels of intrapersonal intelligence. It has been determined that the musical intelligence levels of the athletes studying at Aksaray University are very high.

Table 3. Independent sample t test comparing the multiple intelligence levels of athletes according to age variable

	Age Group	**N**	$\bar{x}$	**ss**	**F**	**t**	***p***
Linguistic Intelligence	19-21	58	22.26	8.87	1.939	-0.438	0.663
	22-23	29	23.10	7.65			
Logical Intelligence	19-21	58	21.31	8.92	0.546	-0.354	0.724
	22-23	29	22.00	7.79			
Visual Intelligence	19-21	58	22.53	9.15	3.76	0.000	0.900
	22-23	29	22.83	7.08			
Musical Intelligence	19-21	58	22.24	9.19	3.978	-0.235	0.815
	22-23	29	22.66	6.90			
Natural Intelligence	19-21	58	21.93	8.91	1.462	-0.758	0.450
	22-23	29	23.38	7.24			
Interpersonal Intelligence	19-21	58	21.78	7.58	0.006	-0.369	0.713
	22-23	29	22.41	7.64			
Kinesthetic Intelligence	19-21	58	22.57	8.93	4.213	-0.603	0.548
	22-23	29	23.59	6.53			
Instrinsic Intelligence	19-21	58	21.26	8.22	0.272	-0.256	0.799

	22-23	29	21.76	9.33			
Multiple Intelligence	19-21	58	176.17	60.77	1.942	-0.426	0.671
Theory Scale	22-23	29	181.72	49.67			

At the end of the comparison made depending on the age variable in Table 3,these results are observed; Linguistic intelligence ($p = .663$; $p < 0.05$), Logical intelligence ($p = .724$; $p < 0.05$), Visual intelligence ($p = 0.900$; $p < 0.05$), Musical intelligence ($p = .815$; $p < 0.05$), Nature intelligence ($p = .450$; $p < 0.05$), Interpersonal intelligence ($p = .713$; $p < 0.05$), Kinesthetic intelligence ($p = .548$; $p < 0.05$), Intrinsic intelligence ($p = .799$; $p < 0.05$). And it is observed that there was no significant difference between the total score levels they got from the Multiple Intelligence Theory Scale and the ages of the athletes.

Discussion and Conclusion

As a result of the statistical analysis, kick boxers who continue their education life in Çukurova University are more dominant in linguistic intelligence, visual intelligence and kinethetic intelligence. Also it has been observed that the intelligence levels of kick boxers who continue their education life at Aksaray University are more dominant in the field of logical intelligence, musical intelligence, intrapersonal intelligence and nature intelligence. Based on these statistical results, kickboxers who continue their education life at Çukurova University are better at thinking and expressing words with which they use their language skills better, evaluating complex meanings in the language. They have better features such as perceiving visual elements fully and transforming things into different forms; perception and reasoning skills of three-dimensional objects are more developed; it can be said that they control body movements well and can use their brain and body coordination more effectively. On the other hand, the kickboxers who continue their education life at Aksaray, use numbers very well and they use logic. They know how to establish more logical relationships between events; rhythm and sound perceptions are at a better level. It can also be said that they can help people plan and manage their own learning, better understand the areas where they expect success, and are more conscious of nature and the environment.

When the multiple intelligence level of athletes was examined according to the age variable, although there was no significant difference between age groups, it is observed that students in the 22-23 age group have higher scores than the students in the 19-21 age group in the sub-dimensions of Linguistic Intelligence, Logical Intelligence, Musical Intelligence, Nature Intelligence, Interpersonal Intelligence, Kinesthetic Intelligence, Intrinsic Intelligence.

At the end of the review, studies supporting the data of this study were encountered. Some of these studies are given below:

In a study conducted by Ermiş in 2018, the intelligence dimensions of the athletes competing in golf and wrestling were determined as follows. Linguistic Intelligence Golf 27.54 and Wrestling 21.53, Logical Intelligence Golf 30.69 and Wrestling 26.09, Visual Intelligence Golf 31.31 and Wrestling 25.13, Musical Intelligence Golf 25.41 and Wrestling 24.34, Kinethetic Intelligence Golf 28.15 and Wrestling 24.25, Intrinsic Intelligence Golf 29.23 and Wrestling 24.00, Nature Intelligence Golf 26.31 and Wrestling 24.03. In their studies conducted in 2020, Çalı and Kangangil found a statistically significant difference between the age of the students studying at sports high schools and their linguistic, logical, visual, musical, interpersonal, intrinsic and naturalistic intelligence scores. According to the sports age variable, when the kinethetic intelligence scores were compared by two, it was found that among those who do sports for less than 1 year and those who do sports for 3-4 years, participants who do sports for 3-4 years are in favor; Between those who do sports for less than 1 year and those who do sports for 5-6 years, in favor of those who do sports for 5-6 years, between those who do sports for less than 1 year and those who do sports for 7 years or more, participants who do sports for 7 years or more are in favor. Among those who do sports for 3-4 years and who do sports for 1-2 years, the ones who do sports for 3-4 years are in favor and among those who do sports for 5-6 years and 1-2y years, in favor of those who do sports for 5-6 years. They found a significant difference between those who do sports for a year or more

and in favor of those who do sports for 7 years or more. Also, in their study conducted in 2016, Aygül and Koç found that female students 'visual-spatial and musical-rhythmic intelligence scores were higher than the male students' average. In the studies conducted by Altınok (2008) for physical education students and Demir (2010) for ninth grade students, the musical-rhythmic and visual-spatial intelligence scores of female students were found to be higher than the scores of male students. In Serin's (2008) study, a significant difference was found in the intelligence scores of teachers in favor of male teachers in the field of visual-spatial intelligence, and in favor of female teachers in the field of interpersonal intelligence. McClellan (2006) developed a scale to identify the dominant intelligence areas of university students in his study. In his study on 874 university students, the field of musical-rhythmic intelligence ranks second with a rate of 18.8%. Müderrisgil (2012) revealed that musical-rhythmic intelligence has the highest rate among eight intelligence domains in terms of the number of students in the percentage ranking among 210 student samples.

Taşkın and Korucuk determined the intelligence dimensions of university students in their studies in 2019 as follows. Linguistic Intelligence 24.13 Logical-Mathematical Intelligence 24.43 Visual-Spatial Intelligence 22.02 Musical-Rhythmic Intelligence 24.30 Kinesthetic Intelligence 23.04 Intrinsic Intelligence 24.57 Naturalist Intelligence 21.96 Social Intelligence 35.82.

In the review, it was determined that athletes or individuals and students who exercise are more advanced in Linguistic intelligence, Logical intelligence, Visual intelligence, Musical intelligence, Kinesthetic intelligence, Inner intelligence and Naturalist intelligence. One of the biggest reasons for this result is undoubtedly the positive contribution of sports and exercise to brain development (https://bilimgenc.tubitak.gov.tr/makale/spor-yap-beynin-formda-kalsin). Another important effect is that sports significantly contributes to the socialization and personality development of the individual (Tazegül, 2021; 2014; 2018). The theory of multiple intelligences, utilizing cognitive science, developmental psychology and neuroscience, argues that the intelligence level of each individual is formed by autonomous powers or abilities and that there are 9 intelligence powers. Nowadays, with the developments in sports education, performance and psychology, it has been started to consider what athletes able to do rather than what they are already doing. The theory of multiple intelligences reveals the opinion that athletes should be evaluated in terms of their sportive potential abilities and success. The theory of multiple intelligences was put forward for people to think of new educational methods for this purpose. In this study, it was concluded that the human brain has a modular structure and the use of multiple intelligences is an important factor in the structuring of sportive and psychological performance.

As a result, kick boxers who continue their education life at Çukurova University scored higher that students in the group in Logical Intelligence, Musical Intelligence, Intrinsic Intelligence and Natural Intelligence. On the other hand, it is examined that kick boxers who continue their education life at Aksaray University have more dominant intelligence levels. And that students in the 22-23 age group (Kick boxers) had higher scores in the total score of the Multiple Intelligence Theory Scale and in the sub-dimensions of Linguistic Intelligence, Logical Intelligence, Musical Intelligence, Nature Intelligence, Interpersonal Intelligence, Kinethetic Intelligence, than students in the 19-21 age group. When the data obtained in this study were compared with the results of different studies on the same subject, it was observed that individuals who exercise are more dominant in multiple intelligence dimensions. For this reason, students should turn to sports and exercise in order for their intelligence dimensions to develop correctly and efficiently. Thus, they can use their potential more effectively.

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