

**Investigation of Empathic Tendency and Lateral Thinking Tendency Skills of
Faculty of Sport Sciences Students**

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ORIGINAL ARTICLE

Abstract

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The aim of this research is to examine the empathic tendency and lateral thinking tendency skills of the students of the faculty of sports sciences. The population of the research consisted of students studying at the Faculty of Sports Sciences of Ondokuz Mayıs University in the fall semester of the 2020-2021 academic year, and the sample group was composed of 489 students who were determined by random sampling method and participated in the study voluntarily. In order to collect the research data, both the Empathic Tendency Scale developed by Dökmen (1988) and consisted of 20 items, and the Lateral Thinking Tendency Scale consisted of 9 items developed by Semerci (2016) were used. SPSS 22 package program was used in the analysis of the data. "Pearson Correlation Analysis" was performed to determine the relationship between dependent variables. As a result, it was seen that the empathic tendency levels and lateral thinking skills of the sports science faculty students participating in the research were at a good level. It was observed that the empathic tendency levels and lateral thinking disposition skills of the students differed according to the class variable. It was determined that female students' empathic tendency skills were more developed than male students. In addition, the relationship between the scales was found to be positive and significant.

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Keywords: Empathic Tendency, Lateral Thinking, Physical Education and Sport

Spor Bilimleri Fakültesi Öğrencilerinin Empatik Eğilim ve Yanal Düşünme Eğilimi Becerilerinin İncelenmesi

Öz

Bu araştırmanın amacı spor bilimleri fakültesi öğrencilerinin empatik eğilim ve yanal düşünme eğilimi becerilerini incelemektir. Araştırmanın evrenini 2020-2021 eğitim öğretim yılı güz döneminde Ondokuz Mayıs Üniversitesi Spor Bilimleri Fakültesi'nde öğrenim görmekte olan öğrenciler, örneklem grubunu ise tesadüfi örnekleme yöntemi ile belirlenmiş ve araştırmaya gönüllü olarak katılan 489 öğrenci oluşturmaktadır. Araştırma verilerini toplamak amacıyla Dökmen (1988) tarafından geliştirilen ve 20 maddeden oluşan Empatik Eğilim Ölçeğinin yanı sıra Semerci (2016) tarafından geliştirilen ve 9 maddeden oluşan Yanal Düşünme Eğilimi Ölçeği kullanılmıştır. Verilerin analizinde SPSS 22 paket programı kullanılmıştır. Bağımlı değişkenler arasındaki ilişki durumunu saptamak amacıyla "Pearson Korelasyon Analizi" gerçekleştirilmiştir. Sonuç olarak araştırmaya katılan spor bilimleri fakültesi öğrencilerinin empatik eğilim düzeylerinin ve yanal düşünme becerilerinin iyi seviyede olduğu görülmüştür. Öğrencilerin empatik eğilim düzeyleri ve yanal düşünme eğilimi becerilerinin sınıf değişkenine göre farklılaştığı görülmüştür. Kadın öğrencilerin erkek öğrencilere göre empatik eğilim becerilerinin daha gelişmiş olduğu belirlenmiştir. Ayrıca ölçekler arasındaki ilişkinin pozitif yönlü ve anlamlı olduğu saptanmıştır.

Anahtar kelimeler: Empatik Eğilim, Yanal Düşünme, Beden Eğitimi ve Spor

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Introduction

Tendency: not the focus you think, but the life path that you can combine with your own orientation. It can be said that it is an impulse that leads a person to certain things. Empathy is defined as understanding and internalizing someone else's feelings, the situation they are in, or the motivation in their behavior. Lateral thinking, derived by Bono (1967), is a way of thinking that aims to enable people to look at a situation or problem from a different perspective and think broadly (Sungur, 1997).

Research on empathy has increased and diversified until today. Looking at the literature, some researchers have addressed the cognitive aspect of empathy, while others have emphasized the emotional aspect of empathy. However, what is generally emphasized is that empathy has a multidimensional structure (Balçıkanlı and Yıldırım, 2011). Empathy is the right understanding of a person's feelings and thoughts by putting himself/herself in the other person's shoes (Dökmen, 2009). There are many theoretical elements behind this definition, which seems simple. Rogers (1983), who describes empathy as a “kind way of existence”, states that only those who are sure of themselves will not be lost when they enter the strange and absurd world of another person and can easily return to their own world at any time, can do this. Empathic tendency is the potential to engage in empathetic behavior (Esentaş et al., 2017). The empathic tendency, which constitutes the emotional dimension of empathy, shows the potential of empathizing in the daily life of the individual. Individuals with a high empathic tendency have a high desire to understand the feelings of the other and help them. If the empathy of the individual remains only in the cognitive dimension, the desire to help may not emerge. The formation of the desire to help is only possible with empathy established in the emotional dimension (Hacıoğlu, 2007).

The realization of empathic tendency requires the ability to understand the feelings of the other person and to approach with a multi-perspective on the basis of creativity. In this context, lateral thinking skill will support empathic tendency and play an active role in understanding emotions with multiple perspectives. It may be necessary for an individual to approach events with various methods in order to solve the problems he encounters in his daily life, and to be creative in order to achieve this (Craver, 1989; Demirel, 2010; Durukan and Maden, 2010; Turan et al., 2018). It may be necessary to have lateral thinking skills in order to solve problems with multiple perspectives. De Bono (1999) defined lateral thinking as a transition from one model to another in the non-symmetrical modeling system. Lateral thinking is based on considering the problem from different perspectives (Onargan et al., 2004). Lateral thinking can be expressed as a method of solving problems using imagination, rather than using conventional thinking or logic to help us think of solutions that are not initially obvious. An individual with a lateral thinking tendency is a productive individual who explores possibilities, considers all possibilities, has inductive thinking,

is creative, and has skills in using information (De Bono, 1990). Lateral thinking requires using information in a stimulating and intriguing way in order to provide mental structuring.

Lateral thinking is directly related to the behavior of transferring information mentally. Lateral thinking is a way of using attitude and knowledge (De Bono 1977; 1990). Institutions play an important role in the development of lateral thinking through education. It is important for individuals to gain lateral thinking skills in terms of solving and evaluating problems. In addition to the family, educational institutions have a great role in raising this awareness. A person's awareness and perception of what is happening around him creates consciousness (Şimşek, 2014). Individuals must be authentic in order to truly accept themselves (Gedik, 2018). Being aware of the situations occurring in the time period and being attentive is the most common definition of mindfulness (Brown and Ryan, 2003).

In the literature review, no studies were found in which empathic tendency and lateral thinking were considered together. However, there were various descriptive studies that dealt with the empathic tendencies of physical education and sports teacher candidates with different variables (Warner, 1984; Yılmaz and Akyel, 2008; Aykora et al., 2010). Lawrence and Xavier (2013), in their study with 1345 pre-service teachers from different regions, stated that the lateral thinking levels of the pre-service teachers were moderate, and the lateral thinking and sub-dimensions differed significantly in favor of male pre-service teachers in terms of gender. Semerci (2017) concluded in his study that pedagogical formation students had a good level of lateral thinking tendency, did not differ according to the gender variable and differed significantly according to the undergraduate department they graduated from.

It was seen that the studies in the literature generally described empathic tendency and lateral thinking skills separately and determined their relations with different variables. This study was designed to compare the empathic tendency and lateral thinking levels of Faculty of Sports Sciences students according to some variables and to examine the relationship between empathic tendency and lateral thinking tendency level.

Method

Model of the Research

The research was carried out with a descriptive survey method, as it describes the views of the Faculty of Sport Sciences students as they are. Descriptive survey is a type of research approach that aims to describe a pre-existing or existing situation in terms of as it exists. Therefore, the individuals or objects that are the subject of the research are evaluated within their own conditions and defined as they are. No attempt is made to change or influence these situations in any way (Karasar, 2010).

The Universe and the Sample

The universe of the research consists of university students studying at Samsun Ondokuz Mayıs University Faculty of Sport Sciences, and the sample consists of 489 (150 female, 339 male) students, reached by simple random sampling method. As data collection tools in the research, the demographic information form created by the researchers, the "Empathic Tendency Scale (ETS)" developed by Dökmen (1988) and the "Lateral Thinking Tendency Scale (LTTS)" developed by Semerci (2016) were used.

Data Collection Tools

Empathic Tendency Scale

Students' age, gender, education department, grade and sports branches were used in the first part of the scale form, and a scale form consisting of 20 items was used in the second part. The aim of this scale, which was developed based on the theoretical essence of empathy; to measure the potential of individuals to empathize in their daily life. Some items of the Empathic Tendency Scale, which was created in the form of a Likert and consisted of 20 items, were written negatively to prevent individuals' tendency to say yes. Individuals were expected to choose one of the numbers from 1 to 5 next to each item and thus indicate to what extent they agreed with the opinion on that item. The numbers that individuals mark after reading the items in the scale reveal the scores for that item. Negatively written items are scored in reverse, with 1 point for "I totally agree" and 5 points for "I totally disagree". The lowest score can be got from the scale is 20 while the highest as 100. The high score got from the scale means a high empathic tendency, and the low score means a low empathic tendency. The scale was applied to a group of 70 students by Dökmen (1988) and the re-reliability coefficient of the test obtained from this application was found as 0.82.

Lateral Thinking Tendency Scale

A five-point Likert-type "*Lateral Thinking Tendency Scale*", which was developed to reveal the lateral thinking tendency of the students and consisted of 9 items graded from "strongly disagree" to "strongly agree", was used. The reliability coefficient of the scale was calculated as 0.814. The score range of the items obtained from the LTTS scale was determined as Very High (4.2–5.00); High (3.4-4.19); Medium (2.6 - 3.39); Low (1.81-2.59) and Very Low (1.0-1.8).

Analysis of Data

SPSS 22 package program was used for the analysis of the data obtained in the research. The Kolmogorov Smirnov test was used to determine whether the data showed normal distribution and it was determined that the data showed normal distribution. T-test and one-way analysis of variance tests were used in the analysis of the data. In addition, Pearson correlation analysis was performed to determine the relationship between the scales.

Findings

Table 1

Distribution of the Research Group by Demographic Variables

Variable		N	%
Gender	Female	150	30,7
	Male	339	69,3
Age	18-21 years	281	57,5
	22-25 years	185	37,8
	26 years and more	23	4,7
Department	Physical Education and Sports Teaching	111	22,7
	Coaching Training	191	39,1
	Sports Management	187	38,2
Grade	1 st Grade	123	25,2
	2 nd Grade	118	24,1
	3 rd Grade	139	28,4
	4 th Grade	109	22,3
Branch Group	Team Sports	258	52,8
	Individual Sports	231	47,2

The examination of Table 1 showed that 150 (30.7%) of the students in the study were female and 339 (69.3%) were male. Considering the ages of the research group, it was determined that there were 281 (57.5%) students between the ages of 18-21, 185 (37.8%) students between the ages of 22-25 and 23 (4.8%) students aged 26 and over. It was seen that 111 (22.8%) of the students studied in the Department of Physical Education and Sports Teaching, 191 (39.1%) in the Department of Coach Education, and 187 (38.2%) in the Department of Sports Management. According to the grade levels of the participants, 123 (25.2%) of the students studied in the first grade, 118 (24.1%) studied in the second grade, 139 (28.4%) studied in the third grade, and 109 (22.3%) studied in the fourth grade. While the number of students involved in team sports was 258 (52.8%), the number of students participating in individual sports was 231 (47.2%).

Table 2

Comparison of the Research Group's Mean Scores of ETS and LTTS According to Gender Variable

Scales	Gender	N	\bar{X}	Sd	t-Value	p-Value
ETS	Female	150	3.39	0.32	4.201	0.000*
	Male	339	3.26	0.30		
LTTS	Female	150	3.99	0.61	0.195	0.843
	Male	339	3.99	0.64		

*p<0.05

Examination of table 2 determined that there was a statistically significant difference in favor of female students in the comparison of students' ETS according to gender (p<0.05). On the other hand, there was no statistically significant difference in the comparison of gender in the LTTS scale (p>0.05).

Table 3

Comparison of the Research Group's Mean Scores of ETS and LTTS According to Age

Scales	Age	N	\bar{X}	Sd	F	p-Value
ETS	(a) 18-21	281	3,29	0,33	0,400	0,671
	(b) 22-25	185	3,32	0,29		
	(c) 26 years and over	123	3,33	0,27		
LTTS	(a) 18-21	281	3,93	0,63	1,876	0,154
	(b) 22-25	185	4,04	0,64		
	(c) 26 years and over	123	4,08	0,50		

*p<0.05

According to the Table 3, it was determined that there was no statistically significant difference between ETS and LTTS scores according to the age variable of the research group (p>0.05).

Table 4

Comparison of the Research Group's Mean Scores of ETS and LTTS According to The Branch Group Variable

Scales	Branch Group	N	\bar{X}	Sd	t-Value	p-Value
ETS	Team Sports	258	3.31	0.31	0.419	0.675
	Individual Sports	231	3.30	0.31		
LTTS	Team Sports	258	3.97	0.59	-0.312	0.755
	Individual Sports	231	3.99	0.66		

*p<0.05

According to the Table 4, it was determined that there was no statistically significant difference between the branch group variables of the students and their ETS and LTTS scores (p>0.05).

Table 5

Comparison of the Research Group's Mean Scores of ETS and LTTS According to the Department Variable

Scales	Department	N	\bar{X}	Sd	F	p-Value
ETS	(a) PE and Sports Teacher	111	3,31	0,30	0,242	0,785
	(b) Coach Training	191	3,29	0,31		
	(c) Sports Management	187	3,31	0,32		
LTTS	(a) PE and Sports Teacher	111	3,95	0,67	0,201	0,818
	(b) Coach Training	191	4,00	0,63		
	(c) Sports Management	187	3,98	0,60		

*p<0.05

According to the Table 5, it was determined that there was no statistically significant difference between ETS and LTTS scores of the research group according to the department they studied (p>0.05).

Table 6

Comparison of the Research Group's Mean Scores of ETS and LTTS According to the Class

Variable

Scales	Grade Level	N	\bar{X}	Sd	F	p-Value	LSD
ETS	(a) 1 st grade	123	3,27	0,34	2,943	0,033*	a,c-d
	(b) 2 nd grade	118	3,33	0,33			
	(c) 3 rd grade	139	3,27	0,27			
	(d) 4 th grade	109	3,36	0,29			
LTTS	(a) 1 st grade	123	3,97	0,60	3,943	0,008*	b-c
	(b) 2 nd grade	118	4,11	0,53			
	(c) 3 rd grade	139	3,85	0,68			
	(d) 4 th grade	109	4,02	0,66			

*p<0.05

According to the Table 6, it was determined that there was a statistically significant difference among the ETS scores of the 1st, 3rd and 4th grade students, and between the LTTS scores of the 2nd and 3rd grade students according to the class variable the research group studied (p<0.05).

Table 7

Correlation Analysis of the Relationship Between the Empathic Tendency Scale and the Lateral Thinking Tendency Scale

Scales		ETS	LTTS
ETS	r	1	
	p	-	
	N	489	
LTTS	r	0.220**	1
	p	0.000	-
	N	489	489

*p<0.01

As seen in Table 7, it was determined that there was a positive relationship between the Empathic Tendency Scale and the Lateral Thinking Tendency Scale. (r=0.220; p< 0.01).

Discussion and Conclusion

Considering the results of the study, which aimed to determine the relationship between the empathic tendency levels and lateral thinking skills of the students of the faculty of sports sciences, it was seen that the mean scores of the students regarding their empathic tendency and lateral thinking tendency scales were high [ETS \bar{x} =3,308; LTTS \bar{x} =3,985]. In support of our research findings, Yıldız and Yılmaz (2020) found that students' scores on the lateral thinking tendency scale were high in the study aiming to determine the relationship between critical thinking and lateral thinking tendency of primary school teacher candidates. Similarly, Semerci (2017) in his study which he investigated the tendencies of the students, who received pedagogical formation

education, towards lateral thinking found that students mostly tend to think laterally. However, there are also studies in the literature that do not support this result. For example, Yılmaz (2013) found in his research on secondary school students that the empathic tendency levels of the participants were low. It was thought that this situation might be due to the difference in the study group.

In our study, it was determined that the gender variable statistically differentiated the Empathic Tendency mean scores of the students of the faculty of sports sciences, but did not create any difference in terms of Lateral Thinking Tendency. According to the gender variable, the Empathic Tendency mean scores of female students were higher than the mean scores of male students. Karademir and Türkçapar (2017) found that female students had higher levels of empathic tendency in their research in which they examined the empathic tendency levels of Physical Education and Sports School students. Similarly, Balçıkanlı and Yıldırım (2018), in their study examining the empathic tendency levels of indoor hockey players, stated that the empathic tendency levels of female athletes were better than male athletes. Although it has been stated in some studies that the gender variable does not cause a difference in the level of empathic tendency (Korkmaz, 2001; Yılmaz and Akyel 2008), it is seen that the results of most studies conducted in different fields create a significant difference in favor of women in terms of gender variable. (Karakaya 2001; Duru 2002; Uygun 2006; Kuyulu and Beltekin 2020). This can be explained by the fact that women's ability to empathize in their daily lives or these abilities may be more developed. In our study, as the level of lateral thinking tendency was evaluated in terms of gender variable, it was found that the mean scores of female and male students were similar. Yıldız and Yılmaz (2020) reached the conclusion that the lateral thinking levels of female teacher candidates and male teacher candidates were close to each other in terms of gender variable in their study, which aimed to determine the relationship between critical thinking and lateral thinking tendency of primary school teacher candidates. On the other hand, Lawrence and Xavier (2013) concluded that the lateral thinking levels of the participants differed significantly in favor of male teacher candidates in their research conducted with teacher candidates from different regions.

In our study, it was determined that the students studying at the faculty of sports sciences did not make a statistically significant difference in terms of age, department and sports branch group variables, but there were significant differences in terms of class variable. Therefore, it was determined that age and the department of sports sciences did not affect the levels of empathic tendency and lateral thinking tendency. However, it can be said that grade level has an effect on students' empathic tendency and lateral thinking skills. According to the class variable, it was seen that the mean score of empathic tendency of the students of the faculty of sports sciences, who were studying in the 4th grade, was higher than the average of the other students. From this point of

view, it can be concluded that the students in the fourth grade have more advanced empathy skills. When the lateral thinking skills were evaluated in terms of grade level, it was determined that the mean score of the students in the second grade was higher than the mean score of the other students. It can be stated that this situation contributes to the second grade students to approach events from different aspects and to be creative about innovative practices through the learning experiences they have gained individually or professionally. Mutlu et al. (2014) found that there was no statistically significant difference in terms of age and department variables in their research in which they evaluated the empathic tendency and communication skills of university students dealing with tennis. Similarly, Yılmaz and Akyel (2008) concluded that there was no statistically significant difference according to the age variable in their study in which they examined the empathic tendency levels of physical education teacher candidates in terms of various variables. Beşkat (2016), in his research examining the empathic tendency of football spectators and the levels of aggression and violence in sports, found that the fans did not make a significant difference in terms of the sports branch group. These findings support the results of our research.

It was observed that the relationship between the empathic tendency and lateral thinking tendency scores of the students of the faculty of sports sciences was significant and positive. It can be said that the mean scores obtained from both scales are at a good level and that the empathic tendencies of the students may affect their lateral thinking skills. It can be thought that the students of the faculty of sports sciences in the research have the ability to solve problems in line with certain purposes and adopt innovative approaches.

As a result, it has been revealed by this study that the empathic tendency and lateral thinking levels of the students of the faculty of sports sciences are at a good level and that empathic tendency and lateral thinking are in a positive relationship with each other. Good level of lateral thinking skills of students receiving sports education can enable them to overcome the difficulties they will encounter throughout their professional life. It is thought that the sports life or the sports environment contributes to the empathic tendencies of the students and their approach to events from a different perspective (lateral thinking).

Suggestions

It is possible for people to establish healthy relationships and avoid negative behaviors in social life by developing their empathy skills and creating appropriate empathic environments. In order to discover the creative aspects of individuals and to enable them to look at events from different perspectives, it can be suggested that activities that will develop lateral thinking skills should be included more in the curriculum.

Conflict Statement

There was no statement of conflict between the authors regarding the research.

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