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### Content Analysis of Academic Studies Related to Orienteering Sport in Türkiye Between 2001-2021

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**Content Analysis of Academic Studies Related to Orienteering Sport in Türkiye Between 2001-2021****Bariş Derince<sup>1</sup>, Mehmet Güllü<sup>2</sup>****ARTICLE INFORMATION**

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**Volume:** 4, No: 2**Pages:** 587-592**ABSTRACT**

The aim of this study is to examine the data on publication type, publication year, publication language, research method, data collection tools, sample type and research topics in academic studies related to orienteering sport in Türkiye between 2001-2021. Content analysis method, one of the qualitative research methods, has been used as the research model. The data were collected by literature review and analyzed using explanatory content analysis technique. As a result, it has been determined that the number of studies has increased as of 2017, the cognitive aspect of orienteering sports has come to the fore as a subject, and the number of doctoral dissertations is insufficient. In the studies examined, Turkish as a language, quantitative studies as a method, and athletes as a sample type are more numerous. According to the results of this study, the following suggestions can be made: The number of doctoral theses, the number of studies in English language that can be published in international refereed journals, the number of studies conducted by qualitative and mixed methods, studies related to different groups such as referees, coaches and managers should be increased. Orientation sport-specific attitude scale or questionnaire development studies should be done. A wider literature review should be made by considering the current developments and the relations of orienteering sports with different disciplines. Since orienteering sport has cognitive characteristics and can be used as an educational tool, studies related to different disciplines should be carried out.

**Keywords:** Academic Studies, Content Analysis, Orienteering

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## INTRODUCTION

Orienteering, whose popularity and attraction increases day by day by many people from different walks of life, is an outdoor sport that aims to find the checkpoints chosen on the map in order. There are four major disciplines that the International Orienteering Federation recognizes (IOF). These are running, cycling, skiing and trail orienteering (IOF, 2021). It is also done in different ways and conditions such as underwater, canoeing, parachuting, horse-riding, motorcycling, sailing and mountain skiing (Derince & Güllü, 2020; Güngör, 2016). It involves not only physical activity, but also mental activity (Galan 3t al.,2019). It is a sport that does not limit participants in terms of age and physical strength in which the weak can surpass the strong, provides people of all ages with the opportunity to do sports and offers reasons to spend time in nature (Derince & Güllü, 2020). It has significant effects on individuals' socialization and stability levels (Kalkan ve Güzel, 2018). It is both a fun and educational teaching tool (Notarnicola ve ark., 2012; Di Tore, 2016). Since orienteering is a nature sport, it is also important in terms of its relationship with other living things such as plants and animals (Derince ve Güllü, 2020). It also has the function of being an educational tool (Kelly, 2014; Williams, Cliffe &Primary, 2011). In the literature, it has been revealed that orienteering sport has many physical, mental, social and psychological benefits for the individual (Blagi ve ark., 2018; Bektaş ve ark., 2019; Güllü ve ark., 2018a; Deniz, 2012). In addition, there are positive contributions to society, nature and the environment.

Türkiye is an advantageous country for orienteering with its favorable climatic conditions and geographical structure that allows competitions in different disciplines to be held (TOF, 2020; Güllü et al., 2018b). Every year, thousands of people participate in official and private competitions specified in the Annual Activity Calendar of the Turkish Orienteering Federation. In addition, there is significant participation in World Orienteering Day, promotional activities organized in schools and other orienteering-related activities (IOF, 2021; TOF, 2020; WOD, 2021). It can be said that more and more people are interested in this sport every year as the recognition of orienteering sport increases.

Orienteering activities, the social and economic effects they create in the regions where they are carried out and their contributions to the promotion of the region are remarkable. For this reason, the demand for orienteering organizations of local governments has increased. With the increase in the interest of local administrations, the recognition of orienteering sport has increased in the events held in different parts of the country. It is seen that the increase in the recognition of orienteering sports affects individuals who will do academic work.

By analyzing the academic studies on orienteering sport, the following contributions can be made:

- The trend in academic studies on orienteering in Türkiye can be determined.
- With the determination of which features of the orienteering sport are examined, less studied or unexplored areas can be revealed.
- Information can be obtained about how academic studies on orienteering sport affect the development level of orienteering sport in Türkiye.
- Information that will contribute to those who are interested in orienteering sports can be accessed.
- Central and local governments can access data that can be decisive in their activities and policies.
- It can guide the studies to be done about the orienteering sport or the disciplines it is related to orienteering.

The aim of this study is to analyze the academic studies related to orienteering in

Türkiye in a comprehensive way by focusing on parameters such as publication type, publication year, publication language, research method, data collection tools, sample type and research topics. Thus, we wish to reveal trends and patterns in academic research on orienteering sport, contribute to the development of this sport and guide for future research.

## METHOD

### Research Design

In this study, one of the qualitative research methods, which is content analysis methods was used (Yıldırım & Şimşek, 2016). Content analyses are a systematic form of study that aims to reveal general trends and research results in qualitative and quantitative studies on a designated research topic (Çalık & Sözbilir, 2014; Selçuk et al., 2014; Suri & Clark, 2009). The reason for choosing the content analysis method in this study; is the desire to reveal the trends, patterns in the academic research conducted in Türkiye on the sport of orienteering and to provide guidance for potential future research on the sport of orienteering. The results obtained; It can make various contributions to the people from different sections of life such as academic studies, athletes, coaches, educators, sports administrators, central and local administrators.

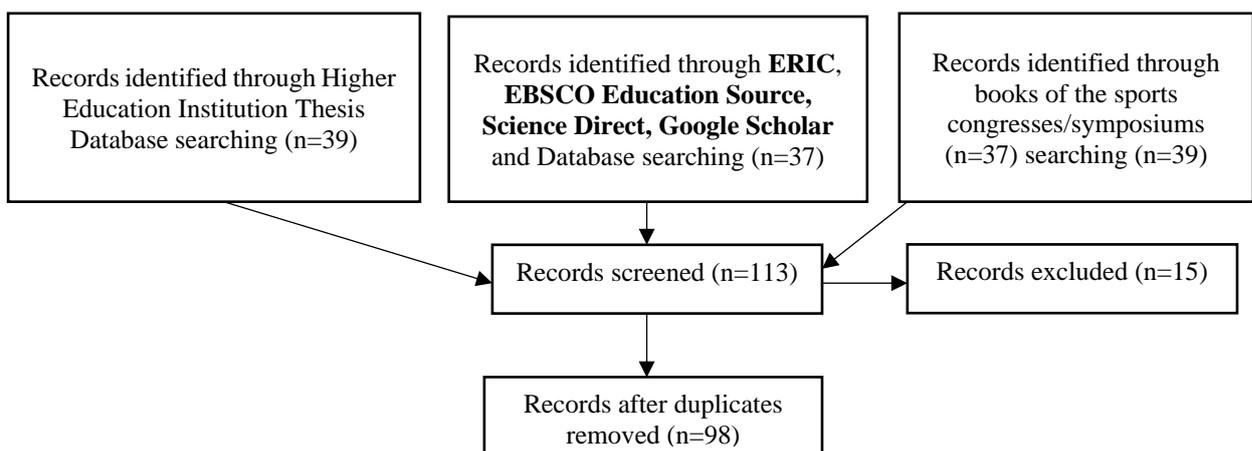
### Data Collection Method

Data were collected by literature review. Higher Education Institution Thesis Database was scanned to reach graduate theses. Publication directories such as ERIC, EBSCO Education Source, Science Direct, Google Scholar and TRindex were scanned to reach the articles. In order to reach oral presentations, the proceedings books of the sports congresses/symposiums that were held between the years 2001 and 2021 were researched. While researching, the keywords "oryantiring", "orienteering" and "orient" were used.

### Criteria for Inclusion in the Research

The research covers postgraduate theses on orienteering sport in Türkiye between 2001-2021, articles published in refereed scientific journals and oral presentations presented in sports congresses/symposiums. As a criterion for inclusion in the study, attention was paid to the fact that the studies were related to orienteering sports and were published in the relevant years. In addition, among the different types of published studies on the same subject written by the same author or authors only one was included in the study. For example, articles produced from published graduate theses and oral presentations published as articles or theses were excluded from the scope of research. In this context, 5 articles and 10 oral presentations were excluded from the scope of the study. In the study, 39 graduate theses, 32 articles and 27 oral presentations were examined.

Figure 1. Study Flowchart



**Data Analysis**

With the aim of the classify the data in the examined studies in an orderly manner, a special data classification form was prepared by the authors for this study. The opinions of two academicians who are experts in their fields were consulted about the suitability of the prepared form. Experts whose opinions were consulted confirmed that the form was appropriate within the scope of this research. The data classification form for each study examined in this study was filled out by the authors. Common data in the completed forms are accepted. In the data with different opinions, the opinions of two academicians who are experts in their fields were taken. Based on the opinions of the experts according to the majority of opinions the data were accepted or not accepted. All data determined in this context were transferred to the Excel sheet. The transferred data were classified according to parameters such as publication type, publication year, publication language, research method, data collection tools, sample type and research subjects. The classifications are intended to reveal trends and patterns in academic research related to the sport of orienteering.

**FINDINGS**

In this part of the study, the findings of the academic studies on orienteering sport in terms of different parameters are included.

**Distribution of Academic Studies on Orienteering Sport by Type and Publication Years**

**Table 1.** Distribution of Academic Studies by Publication Type and Years

Types	Years																Total	
	2001	2005	2006	2007	2008	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020		2021
<b>Doctoral Thesis</b>											1				1	1	1	<b>4</b>
<b>Master's Thesis</b>	1	1	1	1	2	1	1	2	2			2	3	2	6	6	4	<b>35</b>
<b>Articles</b>					1		3	3	2	1	1	3	5	6	3	1	3	<b>32</b>
<b>Oral Presentations</b>			1		1	2		1		1	3	1	6	5	2	2	2	<b>27</b>
<b>Total</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>4</b>	<b>3</b>	<b>4</b>	<b>6</b>	<b>4</b>	<b>2</b>	<b>5</b>	<b>6</b>	<b>14</b>	<b>13</b>	<b>12</b>	<b>10</b>	<b>10</b>	<b>98</b>

The distribution of studies related to orienteering sports in Türkiye is meticulously defined in Table 1, showcasing the comprehensive spectrum of scholarly engagement based on both the publication type and the respective year. The data provide information on academic studies over the years involved. In particular, the year 2017 stands out with the highest number of publications, which corresponds to 14 different studies, including 3 master's theses, 5 articles, 6 oral papers. In addition, in the following years, 13 studies, including 2 master's theses, 6 articles, 5 oral papers, were exhibited in 2018, followed by 12 studies, including 1 doctoral thesis, 6 master's theses, 3 articles, 2 oral papers in 2019.

10 studies were conducted in each of the years 2020 and 2021 and solid scientific participation was ensured. in each of the years 2012 and 2016, 6 studies were conducted and a moderate scientific effort was observed. Significant contributions were made with 5 studies in 2015 and 4 studies for each of them in 2008, 2011 and 2013. There were 3 studies in 2010, 2 studies in 2006 and 2 studies conducted in 2014. These studies are noteworthy, although moderately low. One study was conducted in 2001, 2005 and 2007. In 2002, 2003, 2004 and 2009, no studies were found. It is especially noteworthy that there has been an increase in graduate theses since 2019 and that no doctoral thesis was published until 2015. When the master's theses are examined, the most scientific contributions were made by publishing 6 master's theses in 2019, 6 in 2020 and 4 in 2021. it is noteworthy that the increase in graduate theses has been observed since 2019. The number of articles and oral papers reached the highest

level in 2017 and 2018. Accordingly, 6 oral papers, 5 articles were published in 2017 and 6 articles, 5 oral papers were published in 2018. Based on these data, it can be said that academic studies conducted on orienteering sport have increased significantly since 2017 and have diversified as a genre.

### Publication Languages of Academic Studies on Orienteering Sport

**Table 2.** Distribution of Academic Studies by Languages

Types	Turkish	English	Total
Doctoral Thesis	4	0	4
Master's Thesis	34	1	35
Articles	18	14	32
Oral Presentations	22	5	27
<b>Total</b>	<b>78</b>	<b>20</b>	<b>98</b>

The publication languages of the studies on orienteering sports in Türkiye are shown in Table 2. Accordingly, 78 of the 98 published studies are in Turkish. 14 of the studies published in English are articles, 5 are oral presentations and 1 is a master's thesis.

### Research Methods Used in Academic Studies on Orienteering Sport

**Table 3.** Research Methods Used in Academic Studies on Orienteering Sport

Types	Quantitative	Qualitative	Mixed Research	Total
Doctoral Thesis	1	2	1	4
Master's Thesis	28	4	3	35
Articles	20	10	2	32
Oral Presentations	19	8	0	27
<b>Total</b>	<b>68</b>	<b>24</b>	<b>6</b>	<b>98</b>

The research methods used in academic studies on orienteering sport in Türkiye are shown in Table 3. Accordingly; 68 of the academic studies on orienteering sport have been conducted quantitative research methods, 24 academic studies are qualitative and 6 academic studies are mixed methods.

### Data Collection Tools Used in Academic Studies Related to Orienteering Sport

**Table 4.** Data Collection Tools Used in Academic Studies

	f	%
<b>Scale</b>	41	34,8
Physical/Physiological Measurements and Tests	28	23,7
literature review	17	14,4
Interview	13	11
Observation	12	10,2
Survey	7	5,9
<b>Total</b>	<b>118</b>	<b>100</b>

Data collection tools used in academic studies related to orienteering sport in Türkiye are shown in Table 4. Accordingly, the most preferred data collection methods in studies on orienteering sports are scales. As a data collection tool, scales were used in 41 of the studies, physical/physiological measurements and tests in 28, literature review in 17, interviews in 13 studies, observations in 12 and questionnaires in 7.

**Types of Samples Used in Academic Studies Related to Orienteering Sport**

**Table 5.** Types of Samples Used in Academic Studies

<b>Types</b>	<b>f</b>	<b>%</b>
Athletes	53	63,9
Student	21	25,3
Administrator or Administrative Staff	4	4,8
Physically Disabled Individual	2	2,4
Referee	1	1,2
Individual	1	1,2
Teacher	1	1,2
<b>Total</b>	<b>83</b>	<b>100,0</b>

The types of samples used in academic studies on orienteering sport in Türkiye are shown in Table 5. Accordingly, the most preferred sample type in studies on orienteering sports are athletes. Academic studies on orienteering sports include 53 athletes, 21 students, 4 managers and administrative staff in 4. Other sample types are referees, children with physical disabilities, individuals and teachers.

**Topics of Academic Studies on Orienteering**

**Table 6.** Subject Distributions of Academic Studies

<b>Types</b>	<b>Frequencies (f)</b>				<b>Total</b>
	<b>Doctoral Thesis</b>	<b>Master's Thesis</b>	<b>Articles</b>	<b>Oral Presentations</b>	
Studies on Cognitive Properties	2	6	8	8	<b>24</b>
The Effects of Orienteering Sport on Individuals		12	7	1	<b>20</b>
Studies on Physical and Physiological Properties	1	6	4	6	<b>17</b>
Interactions of Cognitive and Motoric Characteristics		3	2	1	<b>6</b>
Introduction of Orienteering Sport		2	1	1	<b>4</b>
Studies on Orienteering in the Field of Sports Management	1			4	<b>5</b>
The Relationship of Orienteering Sport with Nature		1	2	1	<b>4</b>
Studies on Leisure and Socialization		1	2	1	<b>4</b>
Effects of Orienteering Sport on the Region			2	1	<b>3</b>
Reasons to Participate in Orienteering Sport				2	<b>2</b>
Review of Developed Applications			3		<b>3</b>
Studies on Route Selection		3			<b>3</b>
Problems of orienteering athletes		1			<b>1</b>
Examination of Studies with Orienteering Sport			1	1	<b>2</b>
<b>Total</b>	<b>4</b>	<b>35</b>	<b>32</b>	<b>27</b>	<b>98</b>

The subject distributions of academic studies on orienteering sport in Türkiye are shown in Table 6. Accordingly, the most frequently addressed issues in academic studies on orienteering are cognitive characteristics. Cognitive characteristics were examined in 24 of these studies, the effects of orienteering sport on individuals in 20 studies, and physical/physiological characteristics in 17.

## DISCUSSION

In this part of the study, the findings of each of the research questions are discussed by comparing them with other studies.

According to the data of the Thesis Center of the Council of Higher Education (National Thesis Center, 2022), there are 19.27% of the doctoral theses published between 2001-2021 in Türkiye when the master's and doctoral theses are compared. In the same period, the rate of doctoral thesis in graduate theses within the scope of analysis related to orienteering sport was 10.25%. Compared to other studies: Yılmaz (2019), in his study for the hearing impaired in the field of sports science; Between 2008 and 2018, the rate of doctoral dissertations was 27.58%; Çetinkaya (2011) examined the graduate theses made in the field of recreation in Türkiye; It revealed that the doctoral thesis rate is 17.2%.

According to the records of the Thesis Center of the Council of Higher Education, the rates of doctoral theses in other sports branches between 2001-2021 are as follows: Weightlifting (36.4%), skiing (24.3%), Wrestling (20.7%), gymnastics (20.4%), archery (18.8%), taekwondo (14.1%), judo (11.8%).

According to these data, it can be said that the number of doctoral theses on orienteering sport is low. Since master's programs are more common than doctoral programs, it is usual for the doctoral thesis rate to be lower than the rate of master's thesis (Şahin et al., 2013). However, it is noteworthy that when compared to the doctoral thesis rates in other sports, it turns out that the doctoral thesis rate in orienteering sport is much lower. The possible causes of this condition are indicated below:

- Researchers may not have been able to afford the difficulties they were likely to face in collecting data.
- Researchers may not have been able to reach a sufficient number of equipped people required for orienteering events.
- It may be considered that individuals with sufficient equipment related to the sport of orienteering have not yet performed academic studies in sufficient numbers.
- Researchers may not have found the financial support that may be necessary for orienteering activities.

Doctoral theses are expected to fulfill certain qualifications, such as bringing a scientific innovation, the creation of a new method or the application of a method in a new field (Akbulut et al., 2013). Therefore, with the increase in the number of doctoral theses related to orienteering, it can be assumed that he will make the following contributions to the sport of orienteering:

- It can contribute to the recognition of the sport of orienteering
- New training techniques specific to the sport of orienteering can be developed.
- The effects of orienteering sport can be studied in a more comprehensive way.
- The relationship of the discipline with other disciplines can be studied in a comprehensive way.
- The effects of orienteering sport on daily life can be examined in more detail.

Only 5 of the graduate theses on orienteering sport have been translated into article format. These articles were published after 2017. There are studies that can contribute to the literature from the papers in the congresses and symposiums. It is evaluated that it would be appropriate to examine these papers and publish them in article format with more accessibility.

The first academic study on orienteering sport in Türkiye is a master's thesis which published in 2001. The year of the doctoral thesis carried out is 2015, the first article is 2008 and the first paper is 2006. 70 of the 98 studies examined were from 2015 and beyond. While the number of theses written until 2015 was 12, this figure has reached to 27 from 2015 to date. In the articles, while the number of studies written until 2015 was 10, this figure has reached to 22 from 2015 to date. In the oral presentations, while the number of studies until 2015 was 6, the number of studies carried out from 2015 to date has been 21. In particular, the obvious increase that has emerged since 2015 is noteworthy. It can be thought that the increasing number of studies trigger each other and cause the emergence of studies in different types. In addition, it is believed that orienteering sports attract the interest of local governments, activities are held in different parts of Türkiye, and the demand generated in this regard may be related to the increasing number of studies. Directly or indirectly, these studies can be said to cause orienteering sport to be recognized more, to reach more people and to increase the number of athletes. In recent years, the demand for organizations related to orienteering sports performed abroad has increased. Similarly, there is an increase in participation in organizations such as orienteering camps organized within the scope of sports tourism from abroad. The most important thing is that the studies form the basis for different applications and studies that will be carried out by creating a literature and contribute to the formation of new fields of study. For this reason, it is proposed that the studies to be carried out will be supported financially and spiritually by the federation authorities, local and central governments and the academic community.

The publication language of the studies on orienteering sports is mostly Turkish (79.6%). 14 of the studies in English are articles, 5 of them are oral presentations and one of them is a graduate thesis. Approximately 43.8% of the studies published as articles are in English. Graduate theses written in Türkiye are mostly published in Turkish. For this reason, almost all of the graduate theses examined within the scope of the research are in Turkish. The reason why only 5 of the 27 oral presentations examined within the scope of the research were in English may be that researchers tend to present their oral presentations more domestically for time, distance and economic reasons. When we examined it in terms of articles, a more balanced ratio emerged. Of the articles examined within the scope of the research, 18 of them are in Turkish and 14 of them are in English. The reasons for the high number of articles published in Turkish are; It may be that researchers want their studies to be published in Turkish or that researchers do not know enough English to write articles. Especially international refereed journals mostly publish in English and these publications are at the forefront in terms of scientific quality because of the citation indexes they find place in. Publications in journals of this nature provide a number of respects to the researcher and the universities they are affiliated with and contribute to performance measurements (Poyrazlı & Şahin, 2010). It is evaluated that the articles to be published in these journals will contribute to the performance of the researchers.

Quantitative research methods have been mostly used (69.4) in the academic studies on orienteering sport within the scope of the research. To compare with other studies; In a study examined the graduate theses and articles made in the field of sports sciences related to the hearing impaired between 2008-2018, there are 57 quantitative, 2 qualitative and 1 mixed method (Yılmaz, 2019); In a study examined the oral presentations in the international sports science congresses organized by the Sports Sciences Association in Türkiye; of the total 1624 papers, 89% are quantitative and 11% are qualitative (Bal & Pepe, 2016); In a study where the

analysis of academic studies on sports management in Türkiye was conducted; 70% of the 511 studies were prepared using quantitative method (Yavuz et al., 2018); In the theses on sports management in Türkiye, it is stated that 72.1% of them are prepared by using quantitative, 22.3% by qualitative and 5.6% by using mixed method (Biricik, 2020). According to these data, it is evaluated that there is a tendency towards quantitative research methods in general in the studies carried out in the field of sports sciences, including orienteering. In recent years, with the increase in the number of studies on orienteering sport, it is seen that the variety of methods used in studies have increased.

The ways data collected in academic studies on orienteering sport are asking questions (surveys, scales and interviews), making physical and physiological measurements, screening resources and making observations. In some of the academic studies on orienteering sport; it was seen that the fiction was not well established, the criteria for determining the questionnaires and scales, the introduction of the scale, the explanations about validity and reliability were not made adequately. Tuncel (2008); In his study, which examined the qualities of the researches sent from our country to the international sports sciences journals similarly stated that "Failure reveals the research objectives and determining the appropriate methods clearly affect the quality of the researches adversaly" (Tuncel, 2008). It is naturally inevitable to have pros and cons for the data collection tools chosen (Sevençan & Çilingiroğlu). For this reason, the selection of data collection tools should be treated more sensitively and carefully.

The most frequently used sample type in academic studies on orienteering sport relies on athletes and students. Similarly, in a study examined by graduate theses in the field of sports sciences in Türkiye, it has been stated that athletes and students are the most used sample types (Temel et al., 2016). In a study in which the analysis of academic studies on sports management in Türkiye conducted, it has been stated that students have been preferred more because they are easily accessible as a working group (Yavuz et al., 2018). Orienteering is a sport, so it is natural to examine athletes in research. The examination of students' attitudes and behaviors related to orienteering may be related to the association of orienteering sport with education. There are studies in the literature stated that orienteering is not only a performance sport, but also an educational tool and a teaching technique (Kelly, 2014; Williams et al., 2011). Twilley, Holland, and Morris (2022) conducted a study investigating the disparities in subjective well-being and leisure satisfaction between participants in outdoor and indoor recreational activities. The findings revealed a notable difference in the subjective well-being scores between the two groups, with outdoor recreation participants scoring higher than their indoor counterparts. Additionally, individuals engaging in outdoor recreation reported higher levels of leisure satisfaction compared to those participating in indoor recreation. The number of studies carried out different groups such as coaches, managers and referees, which are other elements of orienteering sport, are very small. For this reason, it can be thought that increasing the studies related to other elements of orienteering sport can make positive contributions to the development of orienteering sport and to the managers of orienteering sport.

The main benefits of sport can be broadly characterized as physical, cognitive, psychological, and social (Mirzeoğlu, 2017; Yetim, 2000). These features have also come to the fore in academic studies on orienteering sports. In the academic studies examined within the scope of this study, the number of studies on the cognitive characteristics of orienteering sport is high. The effects of orienteering sport on individuals and the physical/physiological parameters of orienteering athletes have also been frequently examined. In order to compare this situation with other studies, similar studies in the field of sports sciences in Türkiye have been examined. Temel et al. (2016), in their studies examining the graduate theses made in the field of sports sciences in Türkiye; they found that movement and education, sports management, psycho-social areas in sports and sports education were heavily covered. Çifçi (2014), in his academic study on the sport of swimming; it was determined that physiological

compatibility and psychological studies with motoric and anthropometric features were predominant in the field of health. Bal and Pepe (2016), in the sports-related papers presented at the congresses; stated that the studies carried out in the field of psychosocial field, movement and training sciences, sports and health, physical education and sports teaching came to the fore in sports. Yılmaz (2019), in his study; It has been stated that psychosocial field studies are more common in studies on hearing impaired people in the field of sports science. In the academic studies on orienteering, it was determined that cognitive characteristics were examined more intensively than other studies in the field of sports sciences. Cognitive characteristics are necessary for every sport, but the most important difference that distinguishes orienteering from other sports is that cognitive competencies can often take more precedence over physical skills. It can be said that orienteering sport is also different from other sports branches and studies in the field of sports sciences due to the fact that it can be used as an educational tool and interacts with different fields. Therefore, it may be thought that it would be useful to examine the cognitive contributions of orienteering in particular in more detail. The data to be obtained; positive contributions can be made to the development of orienteering sport and disadvantaged individuals. Learning efficiency can be increased by conducting studies in accordance with different learning strategies with orienteering sports and practices. Considering the relationship of orienteering sport with other disciplines, contributions can be made in different areas such as geography, environmental awareness, nature awareness, ethical values acquisition, social solidarity. In the preliminary academic studies on orienteering sport, the promotion of orienteering sport was considered as a priority and it was determined that these studies also provided resources for following studies. In recent years, academic studies on orienteering have increased and with this fact, the relationships of orienteering sport with different fields have begun to emerge. In particular, it is thought that there is a need for further examination of its relations with other disciplines. The disciplines and suggestions that are considered to be missing in this regard are listed below:

- Related to Urban planning or municipality planning; issues such as the design of settlements, the creation of green areas.
- Related to Organizations and institutions related to the environment; applications designed in a way that can create awareness about the environment and nature.
- Related to management and organization; crisis management and management skills,
- Related to Sociology; the habits of coexistence of the individuals who make up the society and compliance with social rules,
- Related to health; correct movement habits, obesity, preventive measures
- Related to education; the development of orienteering practices that address different learning strategies and the effects of orienteering practices in education.

### **Conclusion**

As a result; In the academic studies conducted on orienteering sport in Türkiye, it has been determined that the number of doctoral thesis studies is insufficient, the number of studies mainly in Turkish studies are on the rise, quantitative studies are more preferred, athletes are mostly examined as a sample type, and most importantly, the cognitive aspect of orienteering sport come to the fore as a subject in the studies.

### **Recommendation**

According to the results of this study, the following suggestions can be made: The number of doctoral theses, the number of studies in English language that can be published in international refereed journals, the number of studies conducted by qualitative and mixed methods, studies related to different groups such as referees, coaches and managers should be

increased. Orientation sport-specific attitude scale or questionnaire development studies should be done. A wider literature review should be made by considering the current developments and the relations of orienteering sports with different disciplines. Since orienteering sport has cognitive characteristics and can be used as an educational tool, studies related to different disciplines should be carried out.

### Limitations

In accordance with the criteria determined in this study, academic studies related to orienteering sports and practices were examined. However, there are also orienteering applications applied in different branches of science such as geography, engineering, science and technology. It is estimated that the examination of these studies will be useful in terms of revealing the relations of orienteering practices with different disciplines.

### REFERENCES

- Acar, N. E. (2021). Acute effect of warm up with short and long interval training on performance parameters in the orienteering sprint race. [Doctoral dissertation, Mersin University]. Higher Education Institution Thesis Database /683690/
- Acar, N. E., & Yıldırım E. (2021). The effect of different training on orienteering performance parameters in the sprint race. 19th International Sport Sciences Congress, 11-14 November, Antalya.
- Akbulut, H. İ., Çepni, S., & Şahin Ç. (2013). Determination of faced problems in doctorate thesis process: Education faculty sample. *Dicle University Journal of Ziya Gökalp Faculty of Education*, (20), 50-69. <https://dergipark.org.tr/en/pub/zgefd/issue/47944/606571>
- Akcan, İ. O. (2016). Orienteering elite athletes of the relationship between the visual reaction time with decision making styles. [Master's thesis, Gazi University]. Higher Education Institution Thesis Database /426905/
- Akman, K. (2017). Investigation of orienteer high-schoolers' motivation levels in terms of different variables. [Master's thesis, Atatürk University]. Higher Education Institution Thesis Database /485708/
- Aksın, K. (2008). Case study on orienteering event in urban organizations. [Master's thesis, Gazi University]. Higher Education Institution Thesis Database /225697/
- Aksın, K., & Tekerek, M. (2010). Risk factors of sportive orienteering organization. 11th International Sport Sciences Congress, 10-12 November, Antalya.
- Alkan, H. (2021). Examine the thoughts of science high school students on teamwork activity according to the orienteering track result. [Master's thesis, Trabzon University]. Higher Education Institution Thesis Database /657761/
- Alparslan, T., Arabacı, R., Erdoğan, M., & İlboğa, E. (2017). The effect of model training program on some hematological features of elite orienteering athletes. 15 th International Sport Sciences Congress, 15-18 November, Antalya.
- Akpınar, G. B. (2020). Relationship between time management perceptions and decision making skills of licensed athletes engaging in orienteering sports. [Master's thesis, Ege University]. Higher Education Institution Thesis Database /643185/
- Arazoğlu, M. (2021). Comparison of physical and mental test parameters of elite orienteering athletes with competition results. [Master's thesis, Anadolu University]. Higher Education Institution Thesis Database /716355/
- Arıkan, A., & Aladağ, E. (2019). The effect of orienteering course on map literacy skills of students at school of physical education and sports. *International Journal of Geography and Geography Education*, (40), 124-138. <https://doi.org/10.32003/iggei.555103>
- Arıkan, A., Gülerüz, O., Güneş, G., & Çetin T. (2021). Developing an orienteering attitudes scale: A validity and reliability study. *International Journal of Psychology and*

- Educational Studies, 8(4), 1-11.  
<https://dergipark.org.tr/en/pub/pes/issue/65718/1020417>
- Arslan, O., Yksek, S., & Ayan, V. (2020). Investigation of the physical and physiological characteristics of Trkiye Olympic Preparation Center orienteer. 4th International Academic Sport Science Congress, 7-9 October, Trabzon.
- Atakurt, E., Őahan, A., & Erman, K. A. (2017). The effect of orienteering education on attention and memory. *Spormetre The Journal of Physical Education and Sport Sciences*, 15 (4), 127-134. [https://doi.org/10.1501/Sporm\\_0000000327](https://doi.org/10.1501/Sporm_0000000327)
- Atakurt, E., ToktaŐ, N., Őahan, A., & Erman K. A. (2017). Multiple intelligence profiles according to chronotype in orienteering athletes. World Congress of Sport Sciences Researches, 23 - 26 November, Manisa.
- Atakurt, E. (2019). The effects of cognitive skills on sprint and memory orienteering course performances of orienteering athletes. [Master's thesis, Akdeniz University]. Higher Education Institution Thesis Database /520554/
- AteŐ, A. A. (2007). Research on the basic problems that the orienteers face in Trkiye. [Master's thesis, Gazi University]. Higher Education Institution Thesis Database /211810/
- Avcı, M. (2013). Geography students' views on the use of orienteering activity in geography education. [Master's thesis, Gazi University]. Higher Education Institution Thesis Database /333451/
- Bal, H., & Pepe, K. (2016). The analysis of the papers presented at international sport sciences congresses in Trkiye organized by the society of sport sciences in terms of content analysis. *Physical Education and Sport Sciences Journal*, 10 (3), 443-452. <https://dergipark.org.tr/en/pub/bsd/issue/53482/711919>.
- BaŐ, M., & Cengiz, R. (2016). Evaluation of Orienteering Athletes' Decision Making Strategies for Some Variables. *International Journal of Sport Culture and Science*, 4 (Special Issue 2), 477-489. [Doi : 10.14486/IntJSCS572](https://doi.org/10.14486/IntJSCS572)
- BaŐaran, Z., & Őutuk, S. (2006). The effect of the management to the success. 9th International Sport Sciences Congress, 3-5 November, MuĐla.
- BaŐoĐlu, U. (2018). An Examination on the self confidence levels of individuals participating in trail orientiring activities based on gender. *Gaziantep University Journal of Sport Science*, 3 (1), 31-39. [https://dergipark.org.tr/en/download/article\\_file/439286](https://dergipark.org.tr/en/download/article_file/439286)
- BaytaŐ, M. (2021). The effects of orienteering education on cognitive and motor skills of hearing impaired students at a level of secondary education. . [Master's thesis, Yznc Yıl University]. Higher Education Institution Thesis Database /677636/
- BektaŐ, F., Kural, B., OrŐan, F., Ayan, V., Yksek, S., & Gr, F. (2017). Problem solving skills of orienteering sportsmen and analysis of self-leadership perceptions according to some variables. 15 th International Sport Sciences Congress, 15-18 November, Antalya.
- BektaŐ, F., Karademir, E., Kaya, S., Kalın, C., Őeker, T., KurtoĐlu, E., ztrk, F., Arslan, E., Aydın, ., Ataklı, G., & Oymak, . (2019). Orienteering training. Ankara: Milli EĐitim BakanlıĐı Genel Yayını.
- BektaŐ, F., Karaman, G., MlazimoĐlu, O., & Ayan, V. (2012). An investigation of the raft-orienting organization as a new discipline of sport. *SelŐuk University Journal of Physical Education and Sport Science*, 14 (2), 249-252. <https://www.ajindex.com/dosyalar/makale/acarindex-1423931807.pdf>
- BektaŐ, F., & Kaya, S. (2018). Analysis of academic researches where were conducted in orienteering sport field in Trkiye with regard to the variables. 16 th International Sport Sciences Congress, 31 - 03 November, Antalya.
- BektaŐ, F., Őep, F., Kalın, C., & Kaya, S. (2021). Orienteering in the book. 19th International Sport Sciences Congress, 11-14 November, Antalya.
- Belviranlı, M., Okudan, N., Kabak, B., ErdoĐan, M., & Karanfilci, M. (2016). The relationship between brain-derived neurotrophic factor, irisin and cognitive skills of endurance

- athletes. The Physician and sportsmedicine, 44 (3), 290-296.  
<https://doi.org/10.1080/00913847.2016.1196125>
- Biricik, Y, S. (2020). Analysis of the theses' content in the discipline project management in sports in Türkiye. EKEV Academy Journal, 24 (81), 523-37.  
<https://dergipark.org.tr/en/pub/sosekev/issue/72156/1161530>
- Blagii, O., Berezovskyi, V., Balatska, L., Kyselytsia, O, Palichuk, Y., & Yarmak, O. (2018). Optimization of Psychophysiological indicators of adolescents by means of sport orienteering. Journal of Physical Education and Sport, 18 (1), 526-531.  
<https://reposit.uni-sport.edu.ua/xmlui/handle/787878787/3522>
- Can, İ. (2020). The study of orienteers' submaximal fatigue level effect on route choice. [Master's thesis, Marmara University]. Higher Education Institution Thesis Database /694520/
- Cin, T. (2017). Effects of core strength training on some physical and physiological parameters of orienteers during preparation phase. [Master's thesis, Gazi University]. Higher Education Institution Thesis Database /474764/
- Coşkuner, Z., Çoban, B., Savucu, Y., Gacar, A., & Genç, E. (2013). A study on assertiveness level of college students who are doing orienteering sports. Advances in Environmental Biology, 7 (4), 725-729. <http://dx.doi.org/10.2139/ssrn.2198836>
- Çakır, S. (2019). Research of the relationship between brain activations, cognitive and physical performance of orienteers. [Master's thesis, Marmara University]. Higher Education Institution Thesis Database /605850/
- Çakmak, E. (2019). The relationship between mental toughness levels and achievement goals of orienteering athletes. [Master's thesis, Ege University]. Higher Education Institution Thesis Database /579390/
- Çalık, M., & Sözbilir, M. (2014). Parameters of content analysis. Education and Science, 39 (174), 33-38. DOI: <http://dx.doi.org/10.15390/EB.2014.3412>
- Çaycı, B., Yaman, M., Çolakoğlu, F. F., Er, F., Karacan, S., İpekoğlu, G., & Gönülateş, S. (2015). The Effects of İntake of İsotonic Sportman's Drinks Pre and Post Orienteering Competition Upon Stress Hormones. 4 th İnternational Conference on Science Culture and Sport, 24-26 May, Ohrid, Macedonia.
- Çekin, R., Aylar, F., Çebi, M., & Öztürk, M. E. (2008). Sports tourism: An application study to determine the suitable orienteering sport areas in Amasya (The İnegöl Mountain). Atatürk Journal of Physical Education and Sport Sciences, 10 (3), 54-64.  
<https://dergipark.org.tr/en/download/article-file/297067>
- Çetinkaya, C. (2011). Effect of eight weeks orienteering exercises on visual reaction time which performed in physical education lessons. [Master's thesis, Dokuz Eylül University]. Higher Education Institution Thesis Database /304478/
- Çetinkaya, G. (2011). The analysis of the postgraduate theses written on recreation in Türkiye (1985-2010 period). Sport Sciences, 6 (1), 13-24.  
<https://dergipark.org.tr/en/pub/nwsaspor/issue/20138/213799>
- Çınar Medeni Ö., Çolakoğlu, F. F., Yüce, K., İpekoğlu, G., & Baltacı G. (2016). The performance measures of orienteers: late adolescents, young adults and adults. Türkiye Klinikleri J Sports Sci, 8 (1), 1-7. doi: 10.5336/sportsci.2015-46888
- Çifçi, Ç. (2014). Investigation related studies academic year 2004-2014 has been made with swimming sectors in the transnational arena. İstanbul University Journal of Sport Science, 5 (1), 35-61. <https://dergipark.org.tr/en/pub/iuspor/issue/24501/259682>
- Çolakoglu, T., Er, F., İpekoğlu, G., Karacan, S., Çolakoglu, F. F., & Zorba, E. (2014). Evaluation of physical, physiological and some performance parameters of the Turkish elite orienteers. Procedia-Social and Behavioral Sciences, 152, 403-408.  
<https://doi.org/10.1016/j.sbspro.2014.09.220>

- Çolakoğlu, T., Karaman, M., Çolakoğlu, F. F., & Erbaş Ü. (2019). Narcissism and perfectionism in orienteering. 17th International Sport Sciences Congress, 13-16 November, Antalya.
- Çomak, N. (2021). Investigation of the graduate theses on orienteering in Türkiye (2005- 2021). *International Journal of Geography and Geography Education (IGGE)*, 44, 413-427. <https://doi.org/10.32003/igge.933262>
- Deniz, E., Karaman, G., Bektaş, F., Yoncalık, O., Güler, V., Kılınç, A., & Ateş, A. (2012). Çocuklara oryantiring eğitimi, 2. Baskı. Ankara, Kültür Ajans Yayınları.
- Deniz, E., Yoncalık, O., Aslan, S., & Sofi, N. (2012). The impact of orienteering sport taught through creative drama methods on five factor personality dimensions. *Procedia- Social and Behavioral Sciences*, 46, 4864-4868. <https://doi.org/10.1016/j.sbspro.2012.06.350>
- Dereli, E., Esentürk, O. K., Çolakoğlu, F. F., & İlhan, E. L. (2020). The relationship between mental training skills and mental resistance levels in orienting sportsmen. *The Journal of International Social Research*, 13 (71), 1131-1137. <https://www.sosyalarastirmalar.com/articles/the-relationship-between-mental-training-skills-and-mental-resistance-levels-in-orienting-sportsmen.pdf>
- Derince, B. (2019). The investigation of the orienting sportsman's dependence on nature. . [Master's thesis, İnönü University]. Higher Education Institution Thesis Database /333451/
- Derince, B., & Güllü, M. (2020). Investigation of the orienteering athletes' dependence on nature: a mixed a methods study. *International Journal of Eurasian Education and Culture*, 5 (10): 1166-1212, <http://dx.doi.org/10.35826/ijoecc.158>
- Döver, N. (2016). Investigation of physical activity levels of elite orienteering athletes (case of Ankara province). [Master's thesis, Kırıkkale University]. Higher Education Institution Thesis Database /458421/
- Eccles, D. W., & Arsal, G. (2015). How do they make it look so easy? The expert orienteer's cognitive advantage. *Journal of Sports Sciences*, 33 (6), 609-615. DOI: [10.1080/02640414.2014.951953](https://doi.org/10.1080/02640414.2014.951953)
- Erdoğan, M. (2019). The effect of different routes on performance in elite orienteering athletes. [Master's thesis, Selçuk University]. Higher Education Institution Thesis Database /550926/
- Eroğlu, B., Özkan, Z., Eroğlu, A. K., & Bilgin Ş. (2015). Research on Problem Solving Skills of Orienteering Athletes in Terms of Some Variables. ERPA İnternational Health and Sports Science Education Congress, 4-7 June, Athens, Greece.
- Galan, Y., Ivanchuk, M., Kushnir, I., Svarychevska, A., Koshura, A., Baidiuk, M., & Yarmak, O. (2019). The factor structure of the physical condition of the 13 year- old young men going in orienteering. *Journal of Physical Education and Sport*, 2 (19), 1236-1241. <https://rep.btsau.edu.ua/handle/BNAU/2991>
- Gölgeli, T. (2020). A Case Study on the effect of route characteristics on decision making in the sport of orienteering. [Master's thesis, Orta Doğu Teknik University University]. Higher Education Institution Thesis Database /621935
- Güllü, M., Derince, B. & Yıldız, K. (2018a). Investigation of the reasons for secondary school students to participate in inter-school orienteering competitions. 1. International Congress of Physical Education, Sport, Recreation and Dance. 26-28 April, İstanbul.
- Güllü, M., Derince, B. & Yıldız, K. (2018b). Examining the activities and problems of orienteering provincial representatives. 1. International Congress of Physical Education, Sport, Recreation and Dance. 26-28 April, İstanbul.
- Güngör, Ş. (2016). Use of horse in creating alternative tourism activities and product range: a Nevşehir case. *International Journal Of Eurasia Social Sciences*, 7 (22), 81-99. <https://search.trdizin.gov.tr/yayin/detay/211466/alternatif-turizm-etkinligi-ve-urun-cesitlili-olusturmada-atin-kullanimi-nevsehir-orne-i>

- Gürer, B., Duman, A. (2020). Investigation of leisure time motivations of young people engaged in orienteering. 18th International Sport Sciences Congress, 07-09 November, Online.
- International Orienteering Federation [IOF]. (2021). About orienteering. [Access date: 4 January 2021]. <https://orienteering.sport/orienteering/>
- Işık, E. B. (2005). Examining the relationship between success and failure and locus of control in orienteering athletes. [Master's thesis, Celal Bayar University University]. Higher Education Institution Thesis Database /164230/
- İmamoğlu M, İmamoğlu A. Effect of orienteering sport on learning outcomes of geography and physical education and sport lessons in secondary education. The Journal of Kesit Academy, (16), 198-207. <https://dergipark.org.tr/en/pub/kesitakademi/issue/59824/863888>
- İmamoğlu, A., İmamoğlu, M. & Uysal, A. (2018). Orienteering sports and their impact on nature in Nevşehir province. Nevşehir Hacı Bektaş Veli University Journal of ISS, 8 (2), 217-230. <https://doi.org/10.30783/nevsosbilen.466797>
- İpekoglu ,G., Gönülateş, S., Er, F., Yaman, M., Karacan, S., Çaycı, B., & Çolakoğlu, F. (2016). İL-6 and İL-1β Responses to a Carbohydrate-Electrolyte Drink in Orienteering Athletes. Baltic Journal of Health and Physical Activity,10 (3), 53-63. doi: [10.29359/BJHPA.10.3.06](https://doi.org/10.29359/BJHPA.10.3.06)
- Karaca, R., & Gündüz, N. (2021). Examining the relationship between mental training and performance in orienteering athletes. Spormetre The Journal of Physical Education and Sport Sciences, 19(1), 99-115. <https://dergipark.org.tr/en/download/article-file/1051793>
- Kaçmaz, Ş. (2019). The effect of a single dose of beetroot juice on some performance parameters in elite orienteering athletes. [Master's thesis, Kırıkkale University University]. Higher Education Institution Thesis Database /536796/
- Kalkan, T. (2017). Investigation of stability and socialization levels in social relationship of individuals in the scope of leisure time activities: Orienteering example. [Master's thesis, Celal Bayar University University]. Higher Education Institution Thesis Database /470375/
- Karaca, F. (2008). Function of orienteering applications on primary school's program. [Master's thesis, Gazi University University]. Higher Education Institution Thesis Database /225685/
- Karaküçük, S., Ayyıldız Durhan, T., Akgül, B. M., Aksın, K., & Özdemir, A. S. (2019). The relationship between recreation benefit and ecocentric, anthropocentric, antipatic approaches in orienteering athletes. Gazi University Journal of Gazi Educational Faculty (GUJGEF), 39 (3), 1263-1288. <https://doi.org/10.17152/gefad.578109>
- Karaküçük, S., Ayyıldız Durhan, T., Aksın, K., Göral, Ş., & Akgül B. M. (2019). Serious leisure perspective of orienteering athletes. Spormetre The Journal of Physical Education and Sport Sciences, 17 (4), 296-318. DOI: [10.33689/spormetre.593719](https://doi.org/10.33689/spormetre.593719)
- Karaman, M., Çolakoğlu, T., Erbaş, Ü., & Çolakoğlu, F. (2019). Investigation of the relationship between orienteering athletes' dependence on nature and imagination in sport. 17th International Sport Sciences Congress, 13-16 November, Antalya.
- Kaya, S. (2020). Investigation of the application process of orienteering activities used in education by trainers and branch teachers within different courses. [Master's thesis, Trabzon University University]. Higher Education Institution Thesis Database /644182/
- Kayaalp, F., & Satılmış, A. (2018). Android operating system based orienteering game mobile application. TBV Journal of Computer Science and Engineering, 11 (1), 1-6. <https://www.researchgate.net/publication/309615413>
- Keskin, A., Altun, M., & Ekici, F. (2018). Investigation of attention levels of orienteering athletes and sedanter individuals between 10-18 ages. 16 th International Sport Sciences Congress, 31 - 03 November, Antalya.

- Kelly, N. (2014). Orienteering made simple and gps technology: an instructional handbook. Bloomington: Author House.
- Kızılet, A., Arslan, E., Özkan, Z., Atlı, M., & Bingöl, M. (2017). A Comparison of Stress Perceptions of Different Levels of Soccer, Athletics and Orienteering Referees. *International Refereed Journal of Humanities and Academic Sciences*, 22, 1-18. [DOI: 10.17368/UHBAB.2017.4.11](https://doi.org/10.17368/UHBAB.2017.4.11)
- Koseva, P. (2014). Effect of Adapted Orienteering as A Recreational Sports Activity for Mentally Disabled Children. 2nd International physical education and sports congress for the disabled, 2-4 May, Batman,
- Kotan, E. (2001). The Examination of extensive orienteering training for the trainers today and the history of orienteering, [Master's thesis, Trabzon University University]. Higher Education Institution Thesis Database /109118/
- Küçük, H., Bayram, L., & Günaydın, G. H. (2012). Rol of Univercities on to Met Orienteering Sport (Model of Ondokuz Mayıs Univercity). 4th International Sport Sciences Student Congress, 19-21 May, İstanbul.
- Mirzeoğlu, D. A. (2017). Temel Kavramlar. D. A. Mirzeoğlu içinde, Model-based physical education teaching. Ankara: Spor Yayınevi ve Kitapevi.
- Orçan, F., Bektaş F. & Kural B (2017). Investigation of the effectiveness of oriental sportsmen's competitive anxiety levels on decision making situations. 15 th International Sport Sciences Congress, 15-18 November, Antalya.
- Orhan, R. (2012). Leadership self-perceptions of orienteering athletes. [Master's thesis, Kırıkkale University]. Higher Education Institution Thesis Database /331470/
- Örsçelik, A., Apaydın, A. H., & Yıldız, Y. (2017). Can We Predict Success of Orienteering Athletes? *Türkiye Klinikleri Journal of Sports Sciences*, 9 (3), 124-132. [DOI: 10.5336/sportsci.2017-55525](https://doi.org/10.5336/sportsci.2017-55525)
- Özdemir, N., Güreş, A., & Güreş Ş.(2011). Investigate the effects of the different personel variable to the alexitimia and loneliness level of who make orienteering sports. *Atabesbd*, 13 (3), 27-34. <https://www.researchgate.net/publication/316455691>
- Özdemir, N., Güreş, A. & Güneş, Ş. (2012). Relationship between problem-solving skills with the dominant intelligence of orienteering athletes. *International Refereed Journal of Academic Social Sciences*, 3(2), 222-35. <https://www.cabdirect.org/cabdirect/abstract/20133157277>
- Özcan, F. (2006). Examination of orieenterlng sport on the effect of mathematical - logical and social individual attitudes of college students. [Master's thesis, Dumlupınar University]. Higher Education Institution Thesis Database /215210/
- Özkan, Z., Arslan, E., & Baytaş, M. (2018). Factors and Expectations of Orienteering Athletes in Türkiye to start this sport. 3 rd International Juried Arts Mixed Exhibition on National Cultures, 15-18 November, Mardin.
- Özkan, B. (2021). Investigation of stress perceptions of attention deficit an hyperactivity symptoms of individuals who do orientiring sports and those who do not. [Master's thesis, Yüzüncü Yıl University]. Higher Education Institution Thesis Database /733435/
- Özkan, Z., Arslan, E., & Baytaş M. (2018). A Study on Learning Maths Symbols with the Help of Orienteering Practice. *Sch. J. Arts. Humanit. Soc. Sci.*, Dec, 6 (12): 2275- 2278. [DOI: 10.21276/sjahss.2018.6.12.17](https://doi.org/10.21276/sjahss.2018.6.12.17)
- Peke, K. (2020). Investigation of oriantiring participants sports commitment and mental endurance. [Master's thesis, İstanbul Gelişim University]. Higher Education Institution Thesis Database /645591/
- Pouya, S., Demir, S., & Demirel, Ö. (2017). Orienteering plays for disabled children. *Kastamonu University Journal of Forestry Faculty*, 17 (4), 608-618. [DOI: 10.17475/kastorman.369080](https://doi.org/10.17475/kastorman.369080)

- Poyrazlı, Ş., & Şahin, A, E. (2010). Suggestions regarding the process of writing and publishing manuscripts in english for international journals. *Education and Science*, 34 (151), 117-131. <http://egitimvebilim.ted.org.tr/index.php/EB/article/view/612>
- Salım, M. (2018). Reviewing problem solving skills and goal commitment among orienteering athletes. [Master's thesis, Muğla Sıtkı Koçman University]. Higher Education Institution Thesis Database /492122/
- Selçuk, Z., Palancı, M., Kandemir, M., & Dündar, H. (2014). Tendencies of the Researches Published in Education and Science Journal: Content Analysis. *Education and Science*,39(173),428-449. <http://egitimvebilim.ted.org.tr/index.php/EB/article/view/3278/721>
- Sevencan, F., & Çilingiroğlu, N. (2007). Qualitative data collection methods used in health field surveys. *Bulletin of Community Medicine*, 26 (1), 1-6.
- Sezgin, H. S. (2020). Examining the development process of seventh grade students' spatial orientation strategies in the orienteering game environment. [Doctoral dissertation, Anadolu University]. Higher Education Institution Thesis Database /646711/
- Suri, H., & Clarke, D. (2009). Advancements in research synthesis methods: From a methodologically inclusive perspective. *Review of Educational Research*, 79 (1), 395-430. <https://journals.sagepub.com/doi/10.3102/0034654308326349>
- Şahin, D., Calp, Ş., Bulut, P., & Kuşdemir, Y. (2013). Investigation of the graduate theses in the department of primary teacher education in terms of various criteria. *Zeitschrift für die Welt der Türken/Journal of World of Turks*, 5 (3), 187-205. <https://dieweltdertuerken.org/admin/files/issues/515-2261-1-PB.pdf>
- Şahin, Ş. K., Sağıdilek, E., Özkaya, G., & Kızıltan, E. (2016). Evaluation mental rotation skills, perceptual and motoric ability of orienteering athletes. 14th International Sport Sciences Congress, 01-04 November, Antalya.
- Şengör, Ç. (2018). The effecy of spatial visualization and spatial anxiety investigation derived from the orienteering traning on 11-13 age students. [Master's thesis, Muğla Sıtkı Koçman University]. Higher Education Institution Thesis Database /520727/
- Şirin, E. F., Bektaş, F., & Duman, S. (2011). The relationship between orienteering athletes' multiple intelligence domains and their decision making styles. *World Applied Sciences Journal*, 14 (2), 228-234. <https://hdl.handle.net/20.500.12809/5717>
- Taş, Y. M. (2010). The differences between who does orienteering sport and coping with stres who doesn't do orienteering sport at all. [Master's thesis, Gazi University]. Higher Education Institution Thesis Database /288785/
- Tanrıkulu, M. (2011). A different use of maps and compasses: Orienteering. *The Journal of National Education*, 41 (191), 120-126. <https://dergipark.org.tr/en/pub/milliegitim/issue/36191/406895>
- Temel, C., Kartal, M., Pehlevan, Z., & Namlı, A. (2016). A Research on the methods and analysis techniques of the postgraduate theses and dissertations on sports in Türkiye. *International Online Journal of Educational Sciences*, 8 (1), 78-86. <http://dx.doi.org/10.15345/iojes.2016.01.007>
- Thesis Center of the Council of Higher Education. (2021). Statistics. [Access date: 11 December 2022]. <https://tez.yok.gov.tr/UlusalTezMerkezi/tarama.jsp>
- Tokat, F., Ağgön, E., Yazıcı, M., & Karakurt, S. (2017). Investigation of some physical and physiological characteristics of orienteering athletes between 10-14 years of age. *World Congress of Sport Sciences Researches*, 23 - 26 November, Manisa.
- Tuna, F. & Balci, A. (2013). Oryantiring Uygulamalarının Coğrafya Öğretmen Adaylarının Özyeterlik Algılarına Etkisi. *International Journal of Geography and Geography Education*, 27, 1-14. <https://dergipark.org.tr/en/pub/marucog/issue/474/3890>
- Tuncel, S, D. (2008). Quality of international publications: Quality of manuscripts sent to sports science journals. *Spormetre The Journal of Physical Education and Sport Sciences*, 6(3), 125-127. <https://dergipark.org.tr/tr/pub/spormetre/issue/41401/500403>

- Turkish Orienteering Federation [TOF]. (2020). Trainings. [Access date: 2 May 2020]. <http://www.oryantiring.org.tr/bilgiBankasiGoster.aspx?tur=5>.
- Twilley, D., Holland, W. H., & Morris, L. (2022). Investigating Recreation Activity Type on College Students' Subjective Well-being and Leisure Satisfaction. *Journal of Education and Recreation Patterns (JERP)*, 3(2), 175-192. DOI: <https://doi.org/10.53016/jerp.v3i2.73>
- Tzvetkov, S. (2008). The Reproducibility of The Ventilatory Anaerobic Threshold Determination Methods Among Two Maximal Treadmill Exercise Protocols in Elite Orienteers. 10th International Sport Sciences Congress, 23-25 October, Bolu.
- Usul, C. (2012). The effect of the orienteering sport for socialization of people with disabilities. [Master's thesis, Bahçeşehir University]. Higher Education Institution Thesis Database /341201/
- Uzuner, F. G. (2019). An investigation of the effects of orienteering on the development of primary school students' math problem-solving skills. [Doctoral dissertation, Trabzon University]. Higher Education Institution Thesis Database /660212/
- Varol, S., Güler, V. (2010). Alternative sports branch that makes children reunite with nature: Orienteering. 1st International Congress on Children Sport, 19-21 April 2010, K.K.T.C.
- Varol, S. (2013). Analyzing some physical and physiological profiles of elite sportsmen in the elder category of orienteering branch. [Master's thesis, Gazi University]. Higher Education Institution Thesis Database /339609/
- Williams, A., & Cliffe, J. (2011). Primary PE.: Unlocking the potential. London: McGraw- Hill Education.
- World Orienteering Day [WOD]. (2020). Home page. [Access date: 5 January 2021]. <http://www.worldorienteeringday.com>.
- Yavuz, Y., Mirzeoğlu, N., & Kaymakçı, Y. (2018). Analysis of the studies in the field of sports management in Türkiye. *Journal of Global Sport and Education Research*, 1 (1), 47-63. <https://dergipark.org.tr/en/pub/jogser/issue/41903/492769>
- Yetim A. Social aspects of sport. *Gazi Journal of Physical Education and Sport Sciences*, 2000; 5 (1), 63-72. <https://dergipark.org.tr/en/pub/gbesbd/issue/27963/298406>
- Yıldırım, A., & Şimşek, H. (2016). Sosyal bilimlerde nitel araştırma yöntemleri. Ankara: Seçkin Publishing.
- Yıldız, K. (2015). The effect of organizational communication of information and communication technology: The case of Turkish Orienteering Federation. [Doctoral dissertation, Abant İzzet Baysal University]. Higher Education Institution Thesis Database /425250/
- Yıldız, K., & Özsoy, S. (2017). Information and communication technologies in sports management: The sample of Orienteering Federation. *World Congress of Sport Sciences Researches*, 3 - 26 November, Manisa.
- Yıldız, K., Güzel, P., Çetinöz, F., & Beşikçi, T. (2017). Outdoor Camp Effects On Athletes: Orienteering Example. *Baltic Journal of Sport and Health Sciences*, 1 (104), 55-64. <https://doi.org/10.33607/bjshs.v1i104.18>
- Yılmaz, A. (2019). A content analysis of the studies conducted on deaf and hard of hearing individuals in the field of sports science in Türkiye (2008-2018). *Sportmetre The Journal of Physical Education and Sport Sciences*, 17(3), 58-66. <https://kitaplar.ankara.edu.tr/xmlui/handle/20.500.12575/76139>
- Yiğit T. (2020). Effect of spatial thinking skills of students orienteering application in social studies. [Master's thesis, Kastamonu University]. Higher Education Institution Thesis Database /647306/

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