



## RESEARCH ARTICLE

# Investigation of Difficulties to Sports Participation in Disabled Individuals in terms of Some Variables

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## Abstract

**Purpose:** The purpose of the present study was to examine the difficulties to sports participation in disabled individuals in terms of some variables. **Method:** A total of 168 physically disabled individuals were included in the present study. Data collection tools were “Difficulties Sports Participation Scale for Persons with Disabilities” and an information form for the participants. Data were collected online. Data analysis was done with IBM SPSS program. **Result:** It was found that the awareness sub-dimension of the scale showed statistically significant difference in terms of marital status ( $p=0.035$ ). It was determined that the overall scale and the environmental strain sub-dimension of the scale showed statistically significant difference in terms of disability rate categories ( $p=0.046$  and  $p=0.035$  respectively). **Conclusion:** It has been understood that there are differences for difficulties to sports participation according to marital status and disability rate in disabled individuals. It is thought that the findings of the present study can contribute to organization of suitable sports activities for disabled people and increase of sports participation in people with disabilities.

## Keywords

Difficulties, Disabled Individuals, Participation, Sports

## INTRODUCTION

Disability is the inability of a person to adapt to social life as a result of the restriction of physical, mental, spiritual, and sensory skills from congenital or later for any reason (Casebolt, 2021; Ünal and Altuğ, 2021). There are activities for disabled individuals to realize their potential, improve their skills, make their lives easier, reduce their addiction levels, and lead an active and healthy life. One of these activities is sport (Smith and Sparkes, 2019; Wilson and Clayton, 2010). Sports enable individuals with disabilities to develop physically, physiologically, psychologically, and cognitively. Sports facilitate integration into society of disabled individuals (Hutzler and Bar- Eli, 1993; Martin, 2013).

Sports for the disabled include all kinds of sportive activities, from recreational activities to competitive sports for the disabled people and people at risk of disability (Konar and Pepe, 2003). In the sports of the disabled, some factors are very important. These factors are the age of disabled, the gender of disabled, the motivation of disabled for games, sports, and competition, the type of disability, the ratio of disability, types of sports, and auxiliary equipment (Kiuppis, 2018; Martin and Whalen, 2014; van der Ploeg et al., 2004).

Disabled individuals expose various difficulties and restrictions in their life. These difficulties and restrictions are due to some personal and environmental reasons (Çoban and Özcebe, 2019; Tekin, 2019; Wilson and Khoo, 2013). Besides their own deficiencies, disabled

Received: 04 September 2023 ; Accepted: 16 October 2023; Online Published: 25 October 2023

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**How to cite this article:** Ünver, G. and Çolakoğlu, F.F. (2023). Investigation of Difficulties to Sports Participation in Disabled Individuals in terms of Some Variables. *Int J Disabil Sports Health Sci*;2023;Special Issue 1:205-212.<https://doi.org/10.33438/ijdsHS.1354484>.

individuals struggle other obstacles due to environmental inadequacies. Therefore, disabled individuals may encounter also various difficulties to participation in sports (Bodde and Seo, 2009; Ergin, 2021; Kirchner et al., 2008). It is thought that information about the difficulties to sports participation is needed for disabled individuals to benefit from certain sports adapted to their needs and situations, to develop sports activities specific to them, to increase in sports participation for them. The purpose of the present study was to examine the difficulties to sports participation in disabled individuals in terms of some variables.

## MATERIALS AND METHODS

### *Research Group*

For the present study, inclusion criteria were being a member of the Turkish Disabled Association, being between the ages of 20-60, having a physical disability from congenital or later, not doing or not being able to do sports, not having any operation in the last 6 months, and volunteering to participate in the study. The research group consisted of 168 physically disabled individuals who met the inclusion criteria. For the present study, ethics committee approval was received from the Social Sciences Scientific Research and Publication Ethics Committee of Osmaniye Korkut Ata University (Decision date: 30.05.2023, Decision number: 2023/6/13). In addition, permission for the study was obtained from the General Presidency of the Turkish Disabled Association. Before data collection, an online informed consent form was sent to individuals who would participate in the study. After their consent was obtained, they were included in the present study.

### *Data Collection*

For the present study, data collection tools were the "Difficulties Sports Participation Scale for Persons with Disabilities" and an information form. The information form included some questions (such as age, gender, level of education, marital status, congenital or later disability, percentage of disability) about the participants. Data were collected between June 2023 and August 2023. Data were collected with the

"Google Forms" application. The sections were created with the Google Forms application. The sections in the application included scale and questions in the information form. A connection link has also been created for the prepared form at the application. The connection link was delivered to the managers of the Turkish Disabled Association. They sent the connection link to individuals who met the inclusion criteria for the present study. The participants filled out the relevant sections via the Google Forms application.

In the present study, the difficulties to sports participation were evaluated with the "Difficulties Sports Participation Scale for Persons with Disabilities". The validity and reliability study of the scale was conducted by Yılmaz et al. (2021). The scale consists of 14 items and 3 sub-dimensions (affective avoidance, awareness, and environmental strain). The scale is evaluated as a 5-point Likert type. There is no reverse coded item in the scale. The scale gives a total score. According to the scale, as the scores of the participants increase, the difficulties faced by the individuals increase, and as the scores decrease, these difficulties decrease.

### *Analysis of Data*

Statistical evaluation of the data was made with the IBM SPSS (version 25, SPSS Inc., Chicago, IL, USA) program. The overall and sub-dimensions scores of the difficulties sports participation scale for persons with disabilities were calculated in accordance with the directive of the scale. The Kolmogorov-Smirnov test was applied to examine whether the data obtained were in accordance with the normal distribution. In addition, the assumption of normal distribution was examined with kurtosis-skewness values and histogram graphics. According to the assessments, it was understood that the data did not show normal distribution. Therefore, non-parametric test was applied for the comparisons. The Mann-Whitney U test was used to compare groups of two-category variables. Correlation analysis was performed to determine the relationship between the overall and sub-dimensions of scale. Since the data did not show normal distribution, Spearman correlation analysis was performed. The statistical significance level was accepted as  $p < 0.05$ .

## RESULTS

A total of 168 physically disabled individuals were included in the present study. The mean age of all participants was  $39.73 \pm 13.11$  years. Distribution of the participants according to education level, 112 (66.7%) people were at the high school or below, 54 (32.1%) people were at the undergraduate level, and 2 (1.2%) people were at the graduate level. The average of disability rates of all participants was  $66.30 \pm 17.79$ . The mean score for overall scale of all participants was  $33.65 \pm 11.48$ . The scores of the scale's sub-dimensions were calculated for all participants. The mean score of the affective avoidance was  $8.22 \pm 4.23$ , the awareness was  $11.51 \pm 4.51$ , the environmental strain was  $13.88 \pm 6.78$ .

The comparisons of difficulties to sports participation in terms of gender and marital status are presented in Table 1. It was found that the overall and sub-dimensions of the scale did not differ statistically significantly in terms of gender ( $p=0.952$ ,  $p=0.699$ ,  $p=0.605$ ,  $p=0.696$ , respectively). It was determined that the awareness sub-dimension of the scale showed a statistically significant difference in terms of marital status ( $p=0.035$ ). For the awareness sub-dimension, the scores of single participants were higher than the scores of married participants. It was determined that the overall scale, the affective avoidance sub-dimension, and the environmental strain sub-dimension did not show a statistically significant difference in terms of marital status ( $p=0.445$ ,  $p=0.392$ ,  $p=0.412$ , respectively).

**Table 1.** The comparisons of difficulties to sports participation in terms of gender and marital status

	Variables	n	Mean Rank	p
<b>Overall Scale</b>	Female participants	40	84.90	0.952
	Male participants	128	84.38	
<b>Affective Avoidance</b>	Female participants	40	81.93	0.699
	Male participants	128	85.30	
<b>Awareness</b>	Female participants	40	87.96	0.605
	Male participants	128	83.42	
<b>Environmental Strain</b>	Female participants	40	81.89	0.696
	Male participants	128	85.32	
<b>Overall Scale</b>	Single participants	95	87.01	0.445
	Married participants	73	81.23	
<b>Affective Avoidance</b>	Single participants	95	87.30	0.392
	Married participants	73	80.86	
<b>Awareness</b>	Single participants	95	91.43	<b>0.035*</b>
	Married participants	73	75.49	
<b>Environmental Strain</b>	Single participants	95	81.81	0.412
	Married participants	73	88.00	

p: statistical significance level, \* $p < 0.05$

The comparisons of difficulties to sports participation in terms of congenital or later disability and disability ratio categories are presented in Table 2. The participants were categorized according to their disability rate percentage as those with 60% or less and those with more than 60%. It was determined that the scale's overall and the scale's sub-dimensions did not show a statistically significant difference according to congenital or later disability ( $p=0.406$ ,  $p=0.568$ ,  $p=0.867$ ,  $p=0.077$ , respectively). It was determined that the overall scale and the

environmental strain sub-dimension of the scale showed statistically significant difference in terms of disability ratio categories ( $p=0.046$  and  $p=0.035$ , respectively). The scores of overall scale and the environmental strain sub-dimension were found to be higher in those with a disability rate above 60% than in those with a disability rate of 60% or less. The affective avoidance and the awareness sub-dimensions of the scale did not show a statistically significant difference in terms of disability ratio categories ( $p=0.276$  and  $p=0.857$ , respectively).

**Table 2.** The comparisons of difficulties to sports participation in terms of congenital or later disability and disability ratio categories

	Variables	n	Mean Rank	p
<b>Overall Scale</b>	Participants with congenital disability	64	80.52	0.406
	Participants with later disability	104	86.95	
<b>Affective Avoidance</b>	Participants with congenital disability	64	81.79	0.568
	Participants with later disability	104	86.17	
<b>Awareness</b>	Participants with congenital disability	64	83.70	0.867
	Participants with later disability	104	84.99	
<b>Environmental Strain</b>	Participants with congenital disability	64	76.05	0.077
	Participants with later disability	104	89.70	
<b>Overall Scale</b>	Participants with 60% or less disability	74	76.07	<b>0.046*</b>
	Participants with more than 60% disability	94	91.14	
<b>Affective Avoidance</b>	Participants with 60% or less disability	74	79.93	0.276
	Participants with more than 60% disability	94	88.10	
<b>Awareness</b>	Participants with 60% or less disability	74	83.74	0.857
	Participants with more than 60% disability	94	85.10	
<b>Environmental Strain</b>	Participants with 60% or less disability	74	75.59	<b>0.035*</b>
	Participants with more than 60% disability	94	91.51	

p: statistical significance level, \*p<0.05

The evaluation of relationships between the overall and sub-dimensions of scale are shown in Table 3. According to the correlation analysis, it was determined that the overall scale had a positive relationship with the affective avoidance sub-dimension at the level of 61.3% ( $r=0.613$ ,  $p<0.001$ ). It was also determined that the overall scale had a positive relationship with the awareness sub-dimension at the level of 76.1%, and with the environmental strain at the level of 84.0% ( $r=0.761$ ,  $p<0.001$ , and  $r=0.840$ ,  $p<0.001$ ,

respectively). It was found that the affective avoidance sub-dimension had a positive relationship with the awareness sub-dimension at the level of 45.6%, and with the environmental strain sub-dimension at the level of 26.6% ( $r=0.456$ ,  $p<0.001$  and  $r=0.266$ ,  $p<0.001$ , respectively). On the other hand, it was determined that there was a significant positive correlation at the level of 51.4% between the awareness and the environmental strain sub-dimensions ( $r=0.514$ ,  $p<0.001$ ).

**Table 3.** The evaluation of relationships between the overall and sub-dimensions of scale

		Overall Scale	Affective Avoidance	Awareness	Environmental Strain
<b>Overall Scale</b>	r	1.000	0.613**	0.761**	0.840**
	p	-	<0.001	<0.001	<0.001
	n	168	168	168	168
<b>Affective Avoidance</b>	r	0.613**	1.000	0.456**	0.266**
	p	<0.001	-	<0.001	<0.001
	n	168	168	168	168
<b>Awareness</b>	r	0.761**	0.456**	1.000	0.514**
	p	<0.001	<0.001	-	<0.001
	n	168	168	168	168
<b>Environmental Strain</b>	r	0.840**	0.266**	0.514**	1.000
	p	<0.001	<0.001	<0.001	-
	n	168	168	168	168

r: correlation coefficient; p: statistical significance level, \*p<0.05, \*\*p<0.01

## DISCUSSION

In the present study, it was aimed to examine the difficulties to sports participation in physically disabled individuals according to variables such as gender, marital status, congenital or later disability, and disability rate. The results showed that there are differences in the difficulties to sports participation according to marital status and disability rate. Disabled individuals may encounter various obstacles for participation to sports activities. Ayan and Ergin (2017) grouped the barriers as personal, social, environmental, and other barriers in their study to examine the factors that prevent individuals with special needs from participating in physical activity programs. Older adults with intellectual disabilities participated in the study by van Schijndel-Speet et al. (2014). In their study, topics related to barriers to physical activity were identified as health and physiological factors, lack of self-confidence, lack of skills, lack of support, transportation problems, costs, and lack of suitable physical activity options and materials. Kang et al. (2007) reported that the most common obstacles faced by physically disabled individuals for physical activity and exercise are lack of time, pain or discomfort.

There may be differences in the difficulties to sports participation of disabled individuals in terms of some variables. In the present study, it was understood that the overall scale and sub-dimensions of the scale did not show a statistically significant difference according to gender. In other words, there was no statistically significant difference in the difficulties to sports participation between women and men. As a result of the study of Esatbeyoğlu and Karahan (2014), in which they identified the obstacles to the participation of disabled people in physical activity, two main themes emerged as environmental factors and individual factors. Under the main theme of environmental factors, sub-themes of social factors and physical factors, and under the main theme of individual factors, sub-themes of economic factors, disability situation, and psychological factors emerged. Within the scope of the social factors sub-theme, the social agents that affect participation are described as friends, families, gender, society, and companion. In the study of Esatbeyoğlu and Karahan (2014), gender was reported within the scope of social factors. In the study of Robertson and Emerson (2010) on

mentally disabled individuals, participation in sports was associated with gender. In the present study, it was found that there was no difference in the difficulties of sports participation in terms of gender variable. The results of the present study about gender variable differed from the results of the studies in the literature. The total number of participants, the ratio of the number of female and male participants, and the type of disability may have been effective for this result. Because a total of 168 physically disabled individuals, 40 women and 128 men, participated in the present study.

In the present study, it was understood that the awareness sub-dimension of the scale showed a statistically significant difference in terms of marital status. But the overall scale, the affective avoidance sub-dimension, and the environmental strain sub-dimension did not show a statistically significant difference in terms of marital status. For the awareness sub-dimension, the scores of single participants were found to be higher than those of married participants. Therefore, it has been concluded that the difficulties for awareness domain are higher in single people than in married people. These results may be due to the fact that single people have more time than married people and single people want to take more time on social life than married people.

In the present study, it was understood that the overall scale and its sub-dimensions did not show a statistically significant difference in terms of congenital or later disability. There was no difference in the difficulties to participation in sports between those with congenital disabilities and those with later disabilities. This result made us think that the main factor for the difficulties to sports participation may not be the time of occurrence of the disability, but the existence of the disability. It was observed that the overall scale and the environmental strain sub-dimension differed statistically significantly according to disability percentage categories, while the affective avoidance and the awareness sub-dimensions did not differ statistically significantly according to disability percentage categories. The scores of overall scale and environmental strain sub-dimension were higher with a disability rate above 60% than those with a disability rate of 60% or less. Jaarsma et al. (2014) found that the most common personal obstacle for physically disabled athletes to do sports is being dependent on others for exercising. Argan et al. (2021) mentioned the

obstacles faced by physically disabled athletes in their sports experiences and reached the disability degree code of the individual within the scope of personal obstacles. Darcy and Dowse (2013) examined the experiences of people with intellectual disabilities in the context of sports. They reported that people who are independent or with a low to moderate need for support have a high level of involvement, while people with a high to very high need for support have significantly lower levels of involvement. The results of the studies in the literature, the degree of disability was emphasized. Thus, the studies in the literature support the result of the present study. In the present study, it was concluded that the difficulties encountered increase as the percentage of disability increases. Increasing the percentage of disability, increases the level of dependency in individuals and increases the need for other individuals or auxiliary equipment. Therefore, it can be considered as expected results that the difficulties encountered for participation to sports are higher in people with a higher percentage disability. In addition, the fact that the environmental strain was higher in the participants with a high disability rate than the participants with a low disability rate. This result showed that the individuals with a high disability rate have more environmental difficulties for participation to perform sports activities. This result may be due to the inadequacy of environmental adaptations and the fact that environmental regulations were not made appropriately for individuals with a high disability rate.

In the present study, according to the correlation analysis a positive and significant relationship was found between the overall and sub-dimensions of the difficulties sports participation scale for persons with disabilities. It has been understood that the overall scale has a higher level of relationship with the environmental strain sub-dimension than the other sub-dimensions. It was also understood that there is a higher level of relationship between the environmental strain and the awareness than the affective avoidance. According to these results, it can be interpreted that environmental strain is prominent in the difficulties of the participants and the environmental strain is more shaped by the awareness. When the education levels of the participants were examined in the present study, it was seen that the number of participants at high

school and below education level was higher than the number of participants at the undergraduate and graduate education level. Increasing the level of education can increase the level of knowledge about the difficulties to participation in sports, especially about coping with environmental factors. Therefore, the education levels and knowledge levels of the participants may have been effective on the relationship results.

### Conclusion

The difficulties to sports participation for disabled individuals may differ in terms of some variables. In the present study, there were differences in difficulties to sports participation for disabled individuals according to marital status and disability rate categories. It is an undeniable fact that sports have important effects on the physical, cognitive, social, and psychological development of disabled individuals. Sports branches and sports activities for the disabled should be developed and disseminated. It is very important to investigate the factors that make it difficult for individuals with disabilities to participate in sports and to examine them in terms of some variables, in order to prepare strategies that increase the level of participation in sports. It may be beneficial to conduct more research on individuals with different disability types and sociodemographic characteristics regarding the difficulties to sports participation for disabled people.

### Acknowledgment

The authors thanks the participants in the present study.

### Conflict of Interest

All authors declare no conflict of interest.

### Ethics Statement

The approval of the Social Sciences Scientific Research and Publication Ethics Committee of Osmaniye Korkut Ata University (Decision date: 30.05.2023, Decision number: 2023/6/13) was obtained for the study.

### Author Contributions

Study Design, GÜ; Data Collection, GÜ and FFÇ; Statistical Analysis, GÜ and FFÇ; Data Interpretation, GÜ; Manuscript Preparation, GÜ and FFÇ; Literature Search, GÜ. All authors have read and agreed to the published version of the manuscript.

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