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EXPLORING MOTIVATION FOR SPORTS PARTICIPATION AMONG THE DISABLED BY SOME OF THEIR DEMOGRAPHIC CHARACTERISTICS

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ABSTRACT

The present study attempted to explore the motivation for sports participation among the disabled by some of their demographic characteristics. The sample consisted of 277 (135 females, 142 males) orthopedically (n = 105), hearing (n = 98), and visually (n = 74) disabled individuals. The data were collected using a demographic information form and the Sports Participation Motivation Questionnaire - Disabled (SPMQ-D), developed by Tekkurşun Demir et al. (2018). The data were compared between the groups through independent samples t-test and one-way analysis of variance (ANOVA). Moreover, the significant differences resulting from ANOVA were subjected to the Scheffe test to reveal the source(s) of differences between the groups. The findings revealed that the participants with an orthopedic disability got significantly higher scores on the SPMQ-D and the extrinsic motivation and amotivation subscales than the visually impaired participants. Besides, the orthopedically disabled males had significantly greater amotivation for sports participation than their female counterparts, while the external motivation scores of the hearing disabled females were significantly higher than those of the males in the same disability group. Nevertheless, there were no significant differences between the participants on their scores on the SPMQ-D and its subscales by onset of disability. On the other hand, the participants - regardless of the type of disability - interested in individual sports and engaging in regular exercises had greater motivation for sports participation than those interested in team sports and not doing regular exercises. Finally, the disabled participants with 3 and 4+ siblings were also found to have higher motivation for sports participation than those with 1 sibling, 2 siblings, and no siblings. Overall, it can confidently be claimed that orthopedically, hearing, and visually disabled individuals differ in their motivation for sports participation by type of disability, gender, sports branch of interest, regular exercise status, and number of siblings.

Keywords: Disabled, individual sports, team sports, motivation for sports participation.

INTRODUCTION

The changing contemporary world also witnesses alterations to everyday concepts and their definitions. Among such concepts, disability may be the prevailing one. Thanks to substantial changes to the definition and classification system for disability worldwide, the concept has gone through transformations in Turkey. Therefore, disability is now shown as the challenges in senses (vision, speech, and hearing), mental processes (learning/doing simple four operations and remembering/concentration compared to peers), and mobility (carrying, walking, going up and down stairs, and holding). Those with great difficulty in at least one of these areas are now considered disabled (EYİB, 2022). Today, while 1 billion of the world's population - about 15% - consist of the disabled, there are approximately 9 million people with disabilities in Turkey, corresponding to about 13% of the population (EYHGM, 2020). The findings of the Turkey Disability Survey suggested that a life detached from normal life, education, and employment and all dependent on others is now perceived as "normal" by the disabled, and the disabled in Turkey are on the way to being "completely" isolated from society (Erbaş, Gümüş & Talaghir, 2021).

Disadvantages occurring due to limited mobility and mental and emotional losses arising from congenital or postnatally acquired defects often affect the disabled's quality of life, social interactions, and participation in social life. Sports prevails to minimize the impacts of such disadvantages among the disabled, raise awareness and positive perspectives on their differences, and create opportunities for them to adapt to society. The World Health Organization recommends that all individuals aged 18-64 should participate in at least 10 minutes of moderate-intensity physical activity per week for a total of 150 minutes. However, 30% of the world's adult population seems to remain away from adopting such a recommendation. Moreover, physical activity levels are even rare among those with physical disabilities (Declerck et al., 2021). While 44% of the disabled participate in sports in the United States, this rate is around 37.6% in the Netherlands (Jaarsma, 2014). The previous research proposed that physical inactivity is observed 4.5 times more among the disabled than non-disabled people (Demirel, Kayıhan, Özmert & Doğan, 2014). Most people with physical disabilities may be unable to exercise regularly, increasing the likelihood of secondary health problems. Besides, factors facilitating and hindering sports participation highly depend on age and type of disability. Thus, selecting a suitable sports branch for physically disabled individuals is likely to increase their sports participation (Jaarsma, Dijkstra, Geertzen & Dekker, 2014).

The barriers to the disabled's participation in physical activities are led mainly by environmental and physical factors. While environmental factors include the lack of support from or restrictive behavior of family, friends, society, and companions, physical factors are related to inadequate facilities, transportation, and materials. Besides, financial causes, disability status and psychological factors are defined within individual factors against sports participation (Esatbeyoğlu & Karahan, 2014; Jaarsma, Dijkstra, Geertzen & Dekker, 2014). Barriers and facilitators to sports participation often depend on age and type of disability, which should be inquired about when advising people about sports (Jaarsma, Dijkstra, Geertzen & Dekker, 2014). Ultimately, the benefits of sports participation for people without physical disabilities are similar to those with physical disabilities. In

addition to the health benefits of sports, the literature frequently mentions its psychosocial benefits for people with physical disabilities, such as better balance and entertainment, social relations, acceptance of disability, and increased self-confidence (Tenenbaum & Eklund, 2007; Martin, 2006; Ellis, Kosma & Cardinal, 2007; Bauer & McCubbin, 2007).

Sports is also a part of the rehabilitation process of the disabled and helps motivate them. Motivation for sports is particularly a remarkable component providing a psychological background for athletes' performance achievements. An athlete often has motivation on the basis of the correlation between their needs and own abilities and the specific characteristics of a particular sports branch, which is also the case for the disabled (Boiko & Babych, 2014). Considering the motivation based on orientation to sports, it seems important to realize the sources of motivation for sports participation, particularly for the disabled. In this regard, motivation is claimed to be affected by intrinsic, extrinsic, and non-motivational sources. While intrinsic motivation enables one to take action to have pleasure from their work, interests, curiosity, and needs within their own decisions to attain their goals, extrinsic motivation involves taking action to please others, being appreciated by people, receiving awards and medals, being applauded, and avoiding punishment (Tekkurşun Demir & İlhan, 2020). Non-motivational sources refer to one's inability to perceive the connection between the behavior they exhibit and the consequences of the behavior and, eventually, the lack of motivation (Emamvirdi, Hosseinzadeh, İlhan & Çolakoğlu, 2020).

The disabled may confront some barriers to sports participation due to personal, social, and environmental factors. In addition, the disabled cannot benefit from the same opportunities to participate in sports activities as healthy individuals do. In order to close such gaps, the disabled should be freed from the barriers to sports participation, encouraged to do sports, and enjoy high motivation for sports participation (Yilmaz, Kirimoğlu & Mirze, 2020; Erbaş, Gümüş & Talaghir 2021). At this point, it is of great importance to uncover the motives for encouraging the disabled for sports participation. Ultimately, the present study aimed to explore the motivation for sports participation among the disabled by some of their demographic characteristics and, thus, reveal the factors affecting their motivation for sports participation.

METHOD

Research Design

This study employed a survey design. Survey research refers to a particular type of research design applied in studies carried out on larger samples to seek participants' views on a subject or event or reveal their interests, skills, abilities, attitudes, and similar characteristics (Fraenkel, Wallen & Hyun, 2006). The primary goal of survey research is to describe the current situation. Since this type of research is often built on a large amount of data, researchers work by performing statistical operations on the data from large samples (Karasar, 2009).

Sample

The sample of the study consisted of orthopedically (n = 105), hearing (n = 98), and visually disabled (n = 74) individuals aged 18-27 years living in Bagcilar, Istanbul. There was a total of 277 voluntary participants, 51.3% (n = 142) were males and 48.7% (n = 135) were females.

Data Collection Tools

The data were collected using a demographic information form and the Sports Participation Motivation Questionnaire-Disabled (SPMQ-D).

Demographic Information Form: Designed by the researcher, it is a self-report form to collect participants' demographic information such as gender, type and onset of disability, sports branch of interest, and regular exercise status.

Sports Participation Motivation Questionnaire-Disabled (SPMQ-D): Developed by Tekkurşun Demir, İlhan, Esentürk and Kan (2018), the SPMQ-D is a 5-point Likert-type scale consisting of 22 items within 3 subscales: Intrinsic Motivation (12 items), Extrinsic Motivation (5 items), and Amotivation (5 items). There are reverse-coded items in the amotivation subscale. The internal consistency coefficient of the SPMQ-D and its subscales were calculated to be ,848.

Normality of Data and Sample Size

It is well-known that sample size highly affects the statistical choices in data analysis. In the literature, the data in research with a sample size of 30 and above are considered to show almost normal distribution. In this study, the normality of distribution was checked by resorting to skewness-kurtosis values. As in the table below, the values between -1.5 and +1.5 are considered proof of the data showing normal distribution (Tabachnick & Fidell, 2013).

Table 1. Skewness and Kurtosis Values of the Participants' Scores

	N	*M*	*Mdn.*	Min.	Max.	Skewness	*SE*	Kurtosis	*SE*
SPMQ-D Total	277	3.53	3.55	1.95	4.82	-.079	.146	-.065	.292
Intrinsic Motivation	277	3.76	3.75	2.08	5.00	-.054	.146	-.127	.292
Extrinsic Motivation	277	3.56	3.60	1.60	5.00	-.189	.146	-.120	.292
Amotivation	277	2.97	3.00	1.20	4.40	-.214	.146	.560	.292

Skewness values' being within the limits of ± 1 can be interpreted as that relevant scores do not show a significant deviation from the normal distribution (Büyüköztürk, 2013). As shown in Table 1, the research data showed normal distribution; therefore, parametric tests were performed on the data. The table also presents the descriptive statistics belonging to the scores on the SPMQ-D and its subscales. The data were presented as frequency, mean, standard deviation, and minimum-maximum. Accordingly, the participants were found to have a mean score of 3.53 on the SPMQ-D, 3.76 on the intrinsic motivation subscale, 3.56 on the extrinsic motivation

subscale, and 2.97 on the amotivation subscale. Independent samples t-test and one-way analysis of variance (ANOVA) were performed to compare the participants' scores by research variables.

Ethical Considerations

The research all followed the principles of publication ethics and scientific research and gathered the data upon the voluntary consent of the participants. Moreover, the Research Ethics Committee of Sirnak University granted ethical approval to the study (03.23.2022, 2022/49, #E.33144).

FINDINGS

Table 2. Participants' Demographic Characteristics

Variables		*f*	%
Gender	Male	142	51.30
	Female	135	48.70
	Total	**277**	**100**
Type of disability	Orthopedically disabled	105	37.90
	Hearing disabled	98	35.40
	Visually disabled	74	26.70
	Total	**277**	**100**
Onset of disability	Congenital	177	63.90
	Postnatally acquired	100	36.10
	Total	**277**	**100**
Number of siblings	1	74	26.70
	2	86	31.00
	3	57	20.60
	4+	52	14.80
	None	19	6.90
	Total	**277**	**100**
Sports branch of interest	Individual sports	175	63.20
	Team sports	102	36.80
	Total	**277**	**100**
Regular exercise	Yes	128	46.20
	No	149	53.80
	Total	**277**	**100**

Table 2 presents the participants' demographic characteristics. The research was carried out on a total of 277 voluntary participants, 142 males (51.30%) and 135 females (48.70%), with an orthopedic (n = 105, 37.90%), hearing (n = 98, 35.40%), and visual (n = 74, 26.70%) disability. More than half of the participants (63.90%) reported being disabled due to prenatal factors. Considering the number of siblings, 74 (26.70%) had a single sibling, 86 (31%) had 2 siblings, 57 (20.60%) had 3 siblings, 52 (14.80%) had 4+ siblings, and 19 (6.90%) did not have a sibling. While more than half of the participants (63.20%) were interested in individual sports, 149 (53.80%) engaged in regular exercise.

Table 3. Participants' Scores By Gender

Type of Disability	Scale	Gender	N	*M*	*SD*	*t*-test		
						t	*df*	*p*
Orthopedically Disabled	SPMQ-D	Male	53	3.62	.479	1.311	89.489	.198
		Female	46	3.48	.557			
	Intrinsic Motivation	Male	53	3.80	.580	.510	94.068	.612
		Female	46	3.74	.600			
	Extrinsic Motivation	Male	53	3.67	.606	1.462	90.191	.147
		Female	46	3.48	.693			
	Amotivation	Male	53	3.13	.440	2.424	97.00	.017*
		Female	46	2.86	.631			
Hearing Disabled	SPMQ-D	Male	48	3.47	.462	-.699	89.834	.486
		Female	45	3.53	.485			
	Intrinsic Motivation	Male	48	3.72	.522	.017	90.853	.986
		Female	45	3.72	.509			
	Extrinsic Motivation	Male	48	3.42	.615	-1.921	89.972	.058*
		Female	45	3.67	.641			
	Amotivation	Male	48	2.91	.493	-.536	89.538	.594
		Female	45	2.97	.525			
Visually Disabled	SPMQ-D	Male	41	3.47	.546	-.994	78.998	.323
		Female	44	3.58	.468			
	Intrinsic Motivation	Male	41	3.74	.562	-.359	80.471	.720
		Female	44	3.78	.505			
	Extrinsic Motivation	Male	41	3.42	.757	-1.577	80.752	.119
		Female	44	3.67	687			
	Amotivation	Male	41	2.86	.664	-1.128	83.00	.262
		Female	44	3.00	.432			

*** $p < 0.05$**

Among orthopedically disabled participants, 53 were males and 46 were females. There were almost the same numbers of male (n= 48) and female (n = 45) participants with a hearing disability. While 41 of the visually disabled participants were males, 44 were females. There were no significant differences in the visually disabled participants' SPMQ-D, intrinsic motivation, and extrinsic motivation scores by gender ($p > 0.05$). Yet, while orthopedically disabled participants significantly differed on the amotivation subscale by gender (t[2.424] = .017; $p < 0.05$), it was the case for the hearing disabled participants on the extrinsic motivation subscale (t[-1.921] = .58; $p < 0.05$). Accordingly, the orthopedically disabled male participants (M = 3,13, SD = 440) got significantly higher amotivation scores when compared to the females (M = 2,86, SD = .631). On the extrinsic motivation subscale, the hearing disabled females (M = 3.67, SD = .641) had significantly higher scores than their male counterparts (M = 3.42, SD = .615) (Table 3).

Table 4. Participants' Scores By Onset of Disability

Variables			N	*M*	*SD*	*t*-test		
						t	*df*	*p*
Orthopedically Disabled	SPMQ-D	Congenital	61	3.50	.515	-1.387	78.408	.169
		Postnatally acquired	38	3.64	.517			
	Intrinsic Motivation	Congenital	61	3.72	.603	-1.159	83.365	.249
		Postnatally acquired	38	3.86	.557			
	Extrinsic Motivation	Congenital	61	3.52	.647	-1.122	77.590	.267
		Postnatally acquired	38	3.67	.658			
	Amotivation	Congenital	61	2.94	.534	-1.440	74.859	.160
		Postnatally acquired	38	3.11	.568			

Hearing Disabled	SPMQ-D	Congenital	57	3.49	.490	-.161	79.511	.870
		Postnatally acquired	36	3.51	.448			
	Intrinsic Motivation	Congenital	57	3.70	.530	-.495	78.853	.616
		Postnatally acquired	36	3.75	.490			
	Extrinsic Motivation	Congenital	57	3.52	.687	-.296	85.385	.757
		Postnatally acquired	36	3.56	.556			
	Amotivation	Congenital	57	2.98	.493	.918	70.680	.369
		Postnatally acquired	36	2.88	.528			
Visually Disabled	SPMQ-D	Congenital	59	3.54	.446	.324	36.368	.748
		Postnatally acquired	26	3.50	.633			
	Intrinsic Motivation	Congenital	59	3.77	.469	.041	83	.967
		Postnatally acquired	26	3.76	.661			
	Extrinsic Motivation	Congenital	59	3.61	.659	.901	38.298	.373
		Postnatally acquired	26	3.43	.867			
	Amotivation	Congenital	59	2.94	.548	.088	45.010	.932
		Postnatally acquired	26	2.93	.587			

*** $p < 0.05$**

Among orthopedically disabled participants, 61 were congenitally disabled, and 46 were disabled for postnatal causes. There were 57 participants with congenital hearing disability and 36 with hearing disability for postnatal reasons. Finally, while 41 participants had congenital visual impairment, 44 were disabled for postnatal causes. The participants did not significantly differ in their scores on the SPMQ-D and its subscales by onset of disability ($p > 0.05$) (Table 4).

Table 5. Participants' Scores By Sports Branch of Interest

Variables			N	*M*	*SD*	*t*-test		
						t	*df*	*p*
Orthopedically Disabled	SPMQ-D	IS	65	3.72	.482	5.150	73.973	.000*
		TS	34	3.23	.431			
	Intrinsic Motivation	IS	65	3.96	.536	5.038	70.135	.000*
		TS	34	3.41	.509			
	Extrinsic Motivation	IS	65	3.74	.612	3.429	65.329	.001*
		TS	34	3.28	.630			
	Amotivation	IS	65	3.13	.525	3.384	67.730	.001*
		TS	34	2.76	.519			
Hearing Disabled	SPMQ-D	IS	57	3.63	.426	3.544	69.247	.000*
		TS	36	3.29	.469			
	Intrinsic Motivation	IS	57	3.85	.458	3.312	66.953	.001*
		TS	36	3.50	.526			
	Extrinsic Motivation	IS	57	3.68	.575	2.714	66.112	.006*
		TS	36	3.31	.671			
	Amotivation	IS	57	3.05	.476	2.737	70.824	.007*
		TS	36	2.76	.509			
Visually Disabled	SPMQ-D	IS	53	3.72	.458	5.452	71.227	.000*
		TS	32	3.20	.410			
	Intrinsic Motivation	IS	53	3.94	.499	4.410	70.493	.000*
		TS	32	3.47	.453			
	Extrinsic Motivation	IS	53	3.80	.653	4.317	63.986	.000*
		TS	32	3.15	.673			
	Amotivation	IS	53	3.14	.507	5.021	69.656	.000*
		TS	32	2.60	.468			

*** $p < 0.05$; IS-Individual Sports; TS-Team Sports**

While 65 orthopedically disabled, 57 hearing impaired, and 53 visually impaired participants were interested in individual sports, 34 orthopedically disabled, 36 hearing impaired, and 32 visually impaired participants were interested in team sports.

It was found out that the orthopedically disabled participants significantly differed in their scores on the SPMQ-D and its subscales by sports branch of interest ($p < .05$). Accordingly, those interested in individual sports (M = 3.96, SD = .536) had significantly more intrinsic motivation compared to those interested in team sports (M = 3.41, SD = .509). Similarly, the orthopedically disabled participants interested in individual sports (M = 3.74, SD = .612) had significantly more extrinsic motivation than their counterparts interested in team sports (M = 3.28, SD = .630). Finally, those interested in individual sports (M = 3.13, SD = .525) were found to have significant amotivation than those interested in team sports (M = 2.76, SD = .519).

The hearing impaired participants also significantly differed in their scores by sports branch of interest ($p < .05$). It was discovered that those interested in individual sports (M = 3.85, SD = .458) had significantly more intrinsic motivation than those interested in individual sports (M = 3.50, SD = .526). The participants with hearing impairment interested in individual sports (M = 3.68, SD = .575) scored significantly higher on the extrinsic motivation subscale than their counterparts interested in team sports (M = 3.31, SD = .671). Those interested in individual sports (M = 3.05, SD = .476) were found to have significant amotivation than those interested in team sports (M = 2.76, SD = .609).

Finally, there were significant differences between the scores of the visually disabled participants by sports branch of interest ($p < .05$). It was concluded that the visually impaired participants interested in individual sports (M = 3.94, SD = .499) had significantly more intrinsic motivation compared to those interested in team sports (M = 3.47, SD = .453). Similarly, those interested in individual sports (M = 3.80, SD = .653) had significantly more extrinsic motivation than their counterparts interested in team sports (M = 3.15, SD = .673). Also, the participants interested in individual sports (M = 3.14, SD = .507) were found to have significant amotivation than those interested in team sports (M = 2.60, SD = .468) (Table 5).

Table 6. Participants' Scores By Regular Exercise Status

Variables			N	*M*	*SD*	*t*-test		
						t	*df*	*p*
Orthopedically Disabled	**SPMQ-D**	Yes	54	3.91	.409	6.408	92.965	.000*
		No	51	3.31	.541			
	Intrinsic Motivation	Yes	54	4.16	.472	6.360	96.356	.000*
		No	51	3.50	.582			
	Extrinsic Motivation	Yes	54	3.98	.567	4.932	95.211	.000*
		No	51	3.35	.717			
	Amotivation	Yes	54	3.27	.468	4.331	96.791	.000*
		No	51	2.82	.571			
Hearing Disabled	**SPMQ-D**	Yes	38	3.78	.305	4.864	96	.000*
		No	60	3.36	.475			
	Intrinsic Motivation	Yes	38	4.03	.352	5.482	95.191	.001*
		No	60	3.56	.510			
	Extrinsic Motivation	Yes	38	3.82	.451	3.690	96	.006*
		No	60	3.38	.646			

	Amotivation	Yes	38	3.13	.411	2.564	92.995	.000*
		No	60	2.86	.545			
Visually Disabled	**SPMQ-D**	Yes	36	3.67	.228	6.856	59.418	.000*
		No	38	3.15	.399			
	Intrinsic Motivation	Yes	36	3.89	.312	5.420	66.895	.000*
		No	38	3.41	.439			
	Extrinsic Motivation	Yes	36	3.73	.467	4.933	67.484	.000*
		No	38	3.09	.645			
	Amotivation	Yes	36	3.07	.339	4.514	62.505	.000*
		No	38	2.60	.543			

*** $p < 0.05$**

As shown in Table 6, 54 of the orthopedically disabled participants did regular exercise, but 51 did not; 38 of the hearing impaired participants engaged in regular exercise, but 60 did not; 36 of the visually impaired participants did regular workout, but 38 did not.

The participants with an orthopedic disability significantly differ in their scores on the SPMQ-D and its subscales by regular exercise status ($p < .05$). The results showed that the participants with an orthopedic disability doing regular exercises ($M = 3.91$, $SD = .409$) had significantly more intrinsic motivation compared to those who did not ($M = 3.31$, $SD = .541$). Moreover, those doing regular exercises ($M = 3.98$, $SD = .567$) had a significant level of extrinsic motivation than their counterparts who did not ($M = 3.35$, $SD = .717$). Finally, the participants engaging in regular exercises ($M = 3.27$, $SD = .468$) got significantly higher scores on the amotivation subscale compared to those who did not ($M = 2.82$, $SD = .571$).

A similar case also applied to the hearing impaired participants by regular exercise status ($p < .05$). It was discovered that those doing regular exercises ($M = 4.03$, $SD = .352$) had greater intrinsic motivation than the participants who did not ($M = 3.56$, $SD = .510$). The participants who did regular exercises ($M = 3.82$, $SD = .451$) got significantly higher scores on the extrinsic motivation subscale than those who did not ($M = 3.38$, $SD = .646$). When it comes to the amotivation subscale, the hearing disabled participants engaging in regular exercises ($M = 3.13$, $SD = .411$) had significantly higher scores than the participants who did not ($M = 2.86$, $SD = .545$).

The participants with a visual disability significantly differ in their scores on the SPMQ-D and its subscales by regular exercise status ($p < .05$). The findings revealed that the visually impaired participants doing regular exercises ($M = 3.89$, $SD = .312$) had significantly more intrinsic motivation compared to those who did not ($M = 3.41$, $SD = .439$). Moreover, those doing regular exercises ($M = 3.73$, $SD = .467$) had a significant level of extrinsic motivation than their counterparts who did not ($M = 3.09$, $SD = .645$). Finally, the participants engaging in regular exercises ($M = 3.07$, $SD = .339$) got significantly higher scores on the amotivation subscale compared to those who did not ($M = 2.60$, $SD = .543$) (Table 6).

Table 7. Participants' Scores By Number of Siblings

Scale	Number of Siblings	N	*M*	*SD*	Source of Variation	*SS*	*df*	*MS*	*F*	*p*	Sig. Dif.
SPMQ-D	1 Sibling (a)	74	3.34	.356	Between G.	17.168	4	4.292	22.667	.001*	c-a,b,e d-a,b,e
	2 Siblings (b)	86	3.39	.438	Within G.	51.504	272	.189			
	3 Siblings (c)	57	3.82	.259	Total	68.672	276				
	4+ Siblings (d)	41	3.90	.738							
	None (e)	19	3.16	.123							
	Total	277	3.53	.498							
Intrinsic Motivation	1 Sibling (a)	74	3.56	.432	Between G.	19.486	4	4.872	21.209	.000*	c-a,b,e d-a,b,e
	2 Siblings (b)	86	3.60	.464	Within G.	62.478	272	.230			
	3 Siblings (c)	57	4.06	.369	Total	81.964	276				
	4+ Siblings (d)	41	4.16	.741							
	None (e)	19	3.37	.214							
	Total	277	3.75	.544							
Extrinsic Motivation	1 Sibling (a)	74	3.32	.554	Between G.	24.017	4	6.004	16.385	.001*	c-a,b,e d-a,b,e
	2 Siblings (b)	86	3.42	.642	Within G.	99.673	272	.366			
	3 Siblings (c)	57	3.89	.407	Total	123.690	276				
	4+ Siblings (d)	41	4.01	.880							
	None (e)	19	3.13	.313							
	Total	277	3.56	.669							
Amotivation	1 Sibling (a)	74	2.87	.414	Between G.	7.843	4	1.961	7.420	.000*	c-a,b,e d-a,b,e
	2 Siblings (b)	86	2.86	.501	Within G.	71.878	272	.264			
	3 Siblings (c)	57	3.19	.483	Total	79.721	276				
	4+ Siblings (d)	41	3.16	.746							
	None (e)	19	2.67	.378							
	Total	277	2.96	.537							

*** $p < 0.05$**

The findings demonstrated that the SPMQ-D ($F = 22.667$; $p < 0.05$), intrinsic motivation ($F = 21.209$; $p < 0.05$), extrinsic motivation ($F = 16.385$; $p < 0.05$), and amotivation ($F = 7.420$; $p < 0.05$) scores of the participants significantly differed by number of siblings.

Then the source(s) of these significant differences was sought using the Scheffe test. The results showed that the scores of the participants with 3 siblings ($M = 3.82$) and 4+ siblings ($M = 3.90$) were significantly higher than the SPMQ-D scores of those with 1 sibling ($M = 3.34$), 2 siblings ($M = 3.39$), and no siblings ($M = 3.16$). On the intrinsic motivation subscale, those with 3 siblings ($M = 4.06$) and 4+ siblings ($M = 4.16$) got significantly higher scores than their counterparts with 1 sibling ($M = 3.56$), 2 siblings ($M = 3.60$), and no siblings ($M = 3.37$). The story was the same on the extrinsic motivation subscale. Accordingly, the scores of the disabled participants with 3 siblings ($M = 3.89$) and 4+ siblings ($M = 4.01$) were found to be significantly higher than those with 1 sibling ($M = 3.32$), 2 siblings ($M = 3.42$), and no siblings ($M = 3.13$). Finally, the participants with 3 siblings ($M = 3.19$) and 4+ siblings ($M = 3.16$) got significantly higher amotivation scores than the participants with 1 sibling ($M = 2.87$), 2 siblings ($M = 2.86$), and no siblings ($M = 2.67$) (Table 7).

Table 8. Participants' Scores by Type of Disability

Scale	Number of Siblings	N	*M*	*SD*	Source of Variation	*SS*	*df*	*MS*	*F*	*p*	Sig. Dif.
SPMQ-D	Orthopedically Disabled (a)	105	3.62	.563	Between G.	2.034	2	1.017	4.182	.016*	a-c;
	Hearing Disabled (b)	98	3.52	.464	Within G.	66.638	274	.243			
	Visually Disabled (c)	74	3.40	.415	Total	68.672	276				
	Total	277	3.53	.498							
Intrinsic Motivation	Orthopedically Disabled (a)	105	3.83	.621	Between G.	1.615	2	.807	2.753	.065	-
	Hearing Disabled (b)	98	3.74	.510	Within G.	80.349	274	.293			
	Visually Disabled (c)	74	3.64	.450	Total	81.964	276				
	Total	277	3.75	.544							
Extrinsic Motivation	Orthopedically Disabled (a)	105	3.67	.713	Between G.	3.172	2	1.586	3.606	.028*	a-c;
	Hearing Disabled (b)	98	3.55	.615	Within G.	120.517	274	.440			
	Visually Disabled (c)	74	3.40	.649	Total	123.690	276				
	Total	277	3.56	.669							
Amotivation	Orthopedically Disabled (a)	105	3.05	.563	Between G.	2.105	2	1.052	3.715	.026*	a-c;
	Hearing Disabled (b)	98	2.96	.512	Within G.	77.616	274	.283			
	Visually Disabled (c)	74	2.83	.511	Total	79.721	276				
	Total	277	2.96	.537							

*** $p < 0.05$**

Table 8 presents that the participants significantly differed in their SPMQ-D ($F = 4.182$; $p < 0.05$), extrinsic motivation ($F = 3.606$; $p < 0.05$), and amotivation ($F = 3.715$; $p < 0.05$) scores by type of disability. Nevertheless, there was no significant difference between the participants by the said variable ($F = 2.753$; $p > 0.05$). As a result of the Scheffe test, it was concluded that the SPMQ-D ($M = 3.62$), extrinsic motivation ($M = 3.67$), and amotivation ($M = 3.05$) scores of those with an orthopedic disability were significantly higher than those of the visually impaired participants ($M = 3.40$, 3.40, and 2.83, respectively) (Table 8).

CONCLUSION and DISCUSSION

The sources of motivation for sports participation seem to bear a critical significance among the disabled. A high level of motivation is likely to allow them to be more active in social life and lead a life more integrated with the life of non-disabled people. The present study aimed to explore the motivation for sports participation among orthopedically, hearing, and visually disabled individuals by some of their demographic characteristics. A total of 277 orthopedically (53 males, 46 females), hearing (48 males, 45 females), and visually disabled (41 males, 44 females) participated in this study voluntarily.

The findings revealed that the orthopedically disabled male participants had significantly more amotivation for sports participation than their female counterparts and that the hearing disabled female participants had

significantly greater extrinsic motivation than the males. Yet, it was not the case for visually impaired participants. In their study on children with special needs, Toptaş Demirci and Eraslan (2020) could not conclude a significant difference between the participants' motivation for sports participation by gender. Similarly, Shihui et al. (2007) reported that the participants did not significantly differ in their motivation for sports participation by gender. Likewise, Tekkurşun Demir and İlhan (2019) found that both visually impaired male and female athletes had similar levels of motivation for sports participation. Moreover, the physically disabled athletes did not significantly differ in motivation for sports participation by gender (Emamvirdi et al., 2020). Mumcu, Acet, Kusan, Zambak and Koç (2017) reported no significant relationship between motivation for sports participation and gender among visually impaired athletes. Contrary to these findings, Tekkurşun Demir and İlhan (2020) concluded that visually impaired female athletes had significantly higher amotivation scores than the male athletes and that hearing impaired female athletes had significantly greater intrinsic and extrinsic motivation compared to the male athletes. Accordingly, it may be asserted that the orthopedically disabled female participants have greater awareness than their male counterparts and that the female participants with hearing impairment may be more influenced by factors such as popularity, applause, and awards compared to the male participants.

In the study, it was found that the participants did not significantly differ in their SPMQ-D, intrinsic motivation, extrinsic motivation, and amotivation scores by onset of disability (congenital or postnatally acquired). The relevant literature seems to have missed the relationship between motivation for sports participation and onset of disability; thus, the present findings may be pioneering for future research.

Considering the variable sports branch of interest, all participants interested in individual sports had significantly higher scores on the SPMQ-D and its subscales than those interested in team sports. Similarly, Tekkurşun Demir and İlhan (2019) reported that visually impaired athletes engaged in individual sports (e.g., judo) had significantly higher extrinsic motivation for sports participation than those involved in team sports (e.g., goalball). In another study, physically disabled basketball players had significantly greater intrinsic and extrinsic motivation for sports participation compared to hearing impaired soccer players (Yilmaz, Kirimoğlu & Mirze, 2020). Tekkurşun Demir and İlhan (2020) concluded that physically disabled athletes competing in individual sports had significantly higher intrinsic motivation than visually and hearing impaired athletes, while visually impaired athletes in individual sports scored significantly higher on the extrinsic motivation subscale compared to their physically and hearing disabled counterparts. In the same study, physically disabled athletes engaging in team sports had significantly higher intrinsic motivation and motivation scores than visually and hearing impaired athletes. In their research on wheelchair basketball players, Meriç and Turay (2020) reported that motivation for sports participation contributes to entertainment, fitness, and movement and reduces emotional reaction and energy. As a result, it may be proposed that sports participation among orthopedically, visually, and hearing impaired individuals who are interested in individual sports are influenced by goal awareness, curiosity to realize target behavior, and pleasure and joy of the sense of achievement, as well as being popular and appreciated, which may lead them not to be able to perceive the causality of their behavior's consequences.

In the study by Top and Akil (2021) on the disabled doing regular exercises, the orthopedic and visually impaired participants' SPMQ-D, intrinsic motivation, extrinsic motivation, and amotivation scores were significantly higher than those of hearing impaired individuals. In this study, orthopedically, visually, and hearing impaired participants with 3 siblings and 4+ siblings had significantly higher SPMQ-D, intrinsic motivation, extrinsic motivation, and amotivation scores than those with 1 sibling, 2 siblings, and no siblings.

Considering motivation for sports participation among the participants by type of disability, it was concluded individuals with an orthopedic disability had significantly higher SPMQ-D, extrinsic motivation, and amotivation scores compared to visually impaired participants. A study by Tekkurşun Demir and İlhan (2020) reported that orthopedically disabled athletes had significantly higher intrinsic motivation and amotivation for sports participation than visually and hearing disabled athletes. In the same study, the scholars found that visually disabled athletes had greater extrinsic motivation for sports participation than physically and hearing disabled athletes. Baikoğlu and Yeşilkaya (2020) suggested that sports participation among hearing disabled students were not influenced by their intrinsic and extrinsic motivation. Based on these findings, it may be claimed that individuals with orthopedic disabilities are more affected by environmental factors and are inclined to ignore the physical and physiological changes as the consequences of sports activities.

It was determined that the participants with an orthopedic disability got significantly higher scores on the SPMQ-D and the extrinsic motivation and amotivation subscales than the visually impaired participants. Besides, the orthopedically disabled males had significantly greater amotivation for sports participation than their female counterparts, while the external motivation scores of the hearing disabled females were significantly higher than those of the males in the same disability group. Nevertheless, there were no significant differences between the participants on their scores on the SPMQ-D and its subscales by onset of disability. On the other hand, the participants - regardless of the type of disability - interested in individual sports and engaging in regular exercises had greater motivation for sports participation than those interested in team sports and not doing regular exercises. Finally, the disabled participants with 3 and 4+ siblings were also found to have higher motivation for sports participation than those with 1 sibling, 2 siblings, and no siblings.

Overall, it can confidently be claimed that orthopedically, hearing, and visually disabled individuals differ in their motivation for sports participation by type of disability, gender, sports branch of interest, regular exercise status, and number of siblings. Thus, such motivational factors, which may be considered remarkable junctions for the orientation to sports, and the relevant recommendations may guide local governments, physical education teachers, trainers, and families. The above-mentioned differences may be explained by the idea that individuals with disabilities have varying conditions for and accessibility to doing sports. Yet, it should be noted that motivation for sports participation among the disabled may differ by some variables. In this sense, the relevant literature hosts both overlapping and contradictory findings.

RECOMMENDATIONS

Personality traits affecting the motivation for sports participation among disabled amateurs and professionals and sedentary individuals may be addressed through other multidimensional independent variables based on different instruments, considering their access to recreational activities and areas promoted by local governments.

ETHICAL TEXT

"This paper strictly followed publication rules and principles, research and publication ethics, and other ethical principles declared by the journal. The author declare they bear responsibility for all kinds of violations and discrepancies arising from the publication of this paper."

"The Research Ethics Committee of Sirnak University granted ethical approval to the present study (03.23.2022, 2022/49, E.33144)."

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