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RESEARCH ARTICLE

Paralympic Awareness of Sports Science Students: Example of TRB1 Region

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Abstract
Students studying in the field of sports sciences, upon graduation, serve as professionals in various sectors of our country's sports industry. The awareness levels of sports professionals regarding the Paralympic Games, the largest sports event for disabled individuals worldwide, could be an important factor affecting the sports lives of disabled individuals. Therefore, the problem of our study is formed by the perception levels of sports science students, who will become sports professionals in the future, about the Paralympic Games. To achieve this aim, the Attitude Scale Towards Individuals with Special Needs and the Paralympic Sports Awareness Scale were administered to undergraduate sports science students in the TRB1 region cities (Bingöl, Elazığ, Malatya, and Tunceli) designated by the Turkish Statistical Institute. Data were analyzed using SPSS 22.0 and Eviews Programs with Mann-Whitney U and Kruskal-Wallis H tests. The analysis results revealed significant differences both in the total scale and sub-dimensions concerning the perceptions of sports science students about Paralympic awareness in terms of demographic questions and their thoughts about disabled individuals. According to the results, while the Paralympic Interests of females significantly differ, departments where students major in Physical Education and Sports Education, and the universities attended by them, have a more positive impact in terms of variables. Furthermore, sports science students who have received courses related to disabled individuals, have experience working with them, or intend to work with disabled individuals also significantly differ in favor of Paralympic awareness.

Keywords
Awareness, Disabled, Paralympic, Sports, Students, University

INTRODUCTION

Throughout history, disabled individuals have encountered various challenges in societies worldwide (Ünal, 2018). These challenges primarily revolved around the fundamental right of all humans - the right to life. In some societies, the prevailing belief was that the existence of disabled individuals posed harm to the community as a whole. For instance, in civilizations like ancient Rome or Greece, philosophers even labeled disabled individuals as a 'weakness' for strong societies (Doğan, 2022; Kemaloğlu, 2014). Looking at the recent past of the last century, it is known that in Nazi Germany, driven by the notion of a pure and superior race, mass killings of disabled individuals were carried out through euthanasia programs known as the T4 Operation (Aktion T4) (Çakı, 2018). Over the centuries, the acceptance of disabled individuals by societies and the emergence of their other needs in a world where they couldn't even fulfill the basic necessity of breathing has become a sign of civilization's progress and evolution (Ünal, 2018). From times when access to basic physiological needs was challenging for all of humanity to today's world where technology has permeated every aspect of our lives, desires and needs have evolved. This evolution has brought about the necessity for disabled individuals to integrate into social life,

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gain respect from others, and not be stigmatized by societies. In advanced societies, it is known that through education and awareness-building policies, these issues are more readily accepted by the community. However, in societies where access to education and information is more challenging and prolonged, disabled individuals still face various problems.

It is well known that the integration of disabled individuals into society has been a significant challenge for many years. One of the developments aimed at eliminating or reducing this problem over time is the participation of disabled individuals in sports. From the inception of wheelchair basketball at Stoke Mandawille Hospital in 1848, initiated by Dr. Ludwig Gutman for the rehabilitation of World War II veterans, to the Paralympic Games, it is believed that disabled individuals have been able to overcome the challenges they face in society more easily through sports (Gutman, 1978). With the increasing use of sports as a method of rehabilitation and physical therapy for disabled individuals, it can be said that changes have also occurred in the attitudes of families and communities towards disabled individuals. In this sense, it is a fact that institutions where disabled individuals can receive education in this field and educators who will provide education in these institutions are crucial for the participation of disabled individuals in sports and the fulfillment of their desire for an active lifestyle (Canpolat, 2020).

It is well known that sports are pursued by people for various purposes such as leisure activities, rehabilitation, and performance enhancement. It is expressed that sports have made a significant contribution to the rehabilitation and integration of disabled individuals. Over time, there has been a rapid increase in the number of disabled individuals interested in competitive sports within society. Furthermore, it can be said that these athletes serve as an incentive for other disabled individuals to participate in sports activities. It is known that the success achieved by disabled individuals who are performance athletes is a significant source of motivation for their careers, both financially and emotionally (Tekkurşun Demir & İlhan, 2019). Larger-scale sports events that appeal to broader audiences can also be considered an additional source of motivation for athletes. Therefore, the Paralympic Games, known as one of the most comprehensive sports events in the world, like the Olympic Games, are considered highly important for disabled athletes competing in various disciplines in our country.

It is observed that Turkey did not participate in 32 years after the first Paralympic Summer Games in the country, and it participated in 6 out of the 16 subsequent summer games. Regarding the Winter Games, the first games were held in 1976, and Turkey participated 38 years later. After the year 2000, there has been a significant increase in the number of participations in the Paralympic Summer Games. In addition to the increasing number of athletes, there has also been an increase in the number of sports disciplines in which participation is demonstrated (IPC 2020). It is considered a contributing factor for the spread of disabled sports across the country that disabled athletes in our society develop in their respective disciplines and represent our country in the Paralympic Games. In this context, this research has been conducted with the idea that prospective sports professionals are an important factor for disabled sports' development in our country and their significance in the lives of disabled individuals involved in sports.

MATERIALS AND METHODS

This research was conducted in accordance with the principles stated in the Declaration of Helsinki and ethical approval was obtained for the study. Participants signed a voluntary informed consent form. As a method, a survey design, one of the quantitative research designs, was preferred. As a data collection tool, a reliable and valid scale aiming to determine individuals' attitudes, beliefs, opinions, behaviors, expectations, and characteristics on specific topics was applied. In addition, survey research is an appropriate method for describing certain characteristics of a quite extensive population. Especially, with a probability-based accurate sampling technique and standard survey questions, reliable results revealing the general characteristics of the population can be obtained (Rubin & Babie, 2017).

Paticipants

In determining the sample size for the power analysis of the conducted research, the effect size was set at 0.30, α=0.05, and β=0.80 for point-biserial correlation values. The analysis resulted in a minimum required sample size of 64. However,

in the sample selection phase, readily available tables were utilized, and a minimum sample size of 384 was included in the study. Within the scope of the research, scales were administered online to students majoring in Sports Science at universities in the cities of Malatya, Elazığ, Bingöl, and Tunceli, which constitute the TRB1 region defined by Turkish Statistical Institute (TUIK). The Statistical Regions Classification by the TUIK has been utilized as the implementation framework for regional statistics and regional development policies in the context of national/regional alignment, including Development Agencies. From this perspective, four provinces within the TRB1 region, which have demographically and structurally homogeneous characteristics, were included in the study. A total of 598 individuals were reached, and active students attending classes answered the questions in the scales.

Various formulas are used to determine the minimum sample size to represent the population. In our study, existing tables were used to determine the minimum sample size to represent the population. In this context, in our study where we determined the reliability level as 0.05 (95%), the minimum sample size to represent a population of 4000 people was determined as a minimum of 350 (Gürbüz & Şahin, 2018; Özbolat & Şehitoğlu, 2018).

For the sample selection technique, the non-probability sampling technique of convenience sampling, commonly used in the social sciences, was employed. According to this technique, data was collected from the easiest and most accessible subjects until a sample of the required size for the study was reached (Gürbüz & Şahin, 2018).

Data Collection Tool

In quantitative research, data collection tools commonly used include surveys, scales, and tests. Surveys, as a data collection tool, enable participants to express their thoughts, attitudes, and behaviors on a specific topic based on pre-established questions in a structured manner. Surveys are one of the most widely used data collection instruments (Alreck & Settle, 1995). Through the analysis of data obtained via surveys, it becomes possible to determine the thoughts, attitudes, and opinions of individuals participating in the research, make various inferences, and draw comparisons. Therefore, in this study, surveys were employed as the primary data collection method.

In the study, the Paralympic Awareness Scale, which consists of two subscales, Paralympic Knowledge (PK) and Paralympic Interest (PI), and was developed by Canpolat & Akyol (2022), was used for Sports Science students. According to the results of the exploratory factor analysis of the scale, it was found to be a model with two factors, comprising 24 items, and explaining 74.588% of the variance, with factor loadings ranging from 0.693 to 0.939. The Cronbach's alpha coefficient was calculated as α= 0.966 for Factor 1, α= 0.969 for Factor 2, and α= 0.958 for the whole scale (Canpolat & Akyol, 2022)."

Statistical Analysis

The Paralympic Awareness Scale and its sub-dimensions were tested for differentiation according to demographic variables using inferential statistical tests. First and foremost, normality tests were conducted for the variables within their respective groups (Kolmogorov-Smirnov for groups with more than 50 observations, and Shapiro-Wilk Normality test for groups with fewer than 50 observations). Since it was determined that the variables were not normally distributed across groups, non-parametric techniques were employed for the analyses. The Mann-Whitney U test was used for comparing two groups, while the Kruskall-Wallis Test was utilized for comparing more than two groups. The analyses were conducted using the Eviews and SPSS software packages. Detailed descriptions of the methods employed are provided in the subsequent subsection.

Mann-Whitney U test

While the t-test is an appropriate method for testing the difference between two group means, it may not yield robust results when parametric assumptions are not met. In this regard, when parametric assumptions are not satisfied, the Mann-Whitney test, which is the non-parametric counterpart of the t-test, can be employed to compare two group means. The null hypothesis of the test states that there is no difference between the groups, while the alternative hypothesis suggests that there is a difference between the groups. The test statistic calculated for the Mann-Whitney U test is as follows:

$$U_1 = n_1 n_2 + \frac{n_1(n_1+1)}{2} - \sum R_1$$

$$U_2 = n_2 n_1 + \frac{n_2(n_2+1)}{2} - \sum R_2$$

n_1: Number of individuals in the first group

n_2: Number of individuals in the second group

R_2: Sum of rank numbers of values in the second group

The smaller of the calculated test statistics is used as the test statistic. It is then compared with the critical value from the table. If the table value is smaller than the test statistic, the null hypothesis is rejected, and it is concluded that there is a difference between the groups (Büyüköztürk, 2014).

Kruskall-Wallis Test

The Kruskal-Wallis H test is a non-parametric test used to compare the mean ranks of more than two groups. The null hypothesis indicates that there is no difference between the groups, while the alternative hypothesis suggests that there is a difference between the groups. The test statistic is calculated as follows:

$$H = \left\{ \frac{12}{N(N+1)} \sum_{j=1}^{k} \frac{R_j}{n_j} \right\} - 3(N+1)$$

n_j: Number of individuals in the jth group
R_j: Sum of the rank numbers of values in the jth group
N: Total number of observations in all groups

R_1: Sum of rank numbers of values in the first group

The calculated test statistic is compared to the table value. If the test statistic is greater than the table value, the alternative hypothesis is accepted, indicating that there is a difference in the mean ranks among the groups (Büyüköztürk, 2014)

RESULTS

Normality tests were conducted to determine whether there is a difference among sports science students in terms of variables such as age, gender, university, department, class, the status of taking courses related to disabled individuals, experience working with disabled individuals, or the desire to work with them, with respect to the entire Paralympic Awareness Scale and the Paralympic Knowledge and Interest subscales. Kolmogorov-Smirnov normality tests were performed for 3 variables with a sample size greater than 50. Based on the normality test conducted, it was observed that the data is not normally distributed. Therefore, the Mann Whitney-U test was applied for intergroup difference testing, and the Kruskal-Wallis Test was applied for multiple group difference testing.

Table 1. Percentage and Frequency Distributions for Demographic Variables

		n	%
Gender	Male	357	59.7
	Female	241	41.3
Age	17-20 Age	257	43.0
	21-24 Age	293	49.0
	25 and above	58	8.0
University	İnönü University	198	33.1
	Fırat University	124	20,7
	Bingöl University	160	26.8
	Munzur v	116	19,4
Class	1.Class	179	29.9
	2. Class	156	26.1
	3. Class	152	25.4
	4. Class	111	18.6
Department	Caoching Education	139	23.2
	Physical Educaiton and Sport Teaching	141	23.6
	Physical Educaiton and Sport on Disabilities	80	13.4
	Sport Management	217	36.3
	Total	**598**	**100,0**

Table 2. Results of the Difference Test of Means of Variables by Age Groups: Kruskal-Wallis Test

Variences	Statistic	X		Sd.	p	Groups
PK	8.281	17-20 Age	2,457	598	.016*	17-20/25+
		21-24 Age	2,606			
		25+ Age	2,956			
PI	0.974	17-20 Age	3,793	598	.614	P>0.05
		21-24 Age	3,849			
		25+ Age	4,115			
Total	10.297	17-20 Age	3,013	598	.006*	17-20/25+
		21-24 Age	3,124			
		25+ Age	3,439			

*p<0.05

According to the results obtained from Table 2, there is a difference in the total scale and the PK sub-dimension among age groups. The total scale and the PK variable differ between the 17-20 and 25+ age groups. The mean scores of the relevant variables for age groups with significant differences were examined. For both the total scale and the PK variable, the 25+ age group has a higher average score than the 17-20 age group.

Table 3. Difference Test Results of Means of Variables by Gender: Mann Whitney U Test

		PK	PI	Total
Mann-Whitney U		42906.0	35949.5	39219.0
ASMmp. Sig. (2-tailed)		.957	.001*	.067
Mean	Male	2.572	3.699	3.041
	Female	2.567	4.064	3.191

*p<.05

According to the results in Table 3, the PI variable shows differences between genders, while the PB and the entire scale do not show differences between genders. In the variable PI, where differences were observed, the average scores of females are higher than those of males.

Table 4. Difference Test Results of Means of Variables by Universities: Kuruskal Wallis Test

Variences	Statistic	Unviersity	X	Sd.	p	Groups
PK	44.649	İnönü University	2.857	3	.000*	Fırat-Bingöl Fırat-Munzur Fırat-İnönü Bingöl-İnönü
		Bingöl University	2.523			
		Fırat University	2.055			
		Munzur University	2.695			
PI	3.766	İnönü University	3.962	3	.288	p>0.05
		Bingöl University	3.694			
		Fırat University	3.741			
		Munzur University	3.971			
Total	30.081	İnönü University	3.317	3	.000*	Fırat- Munzur Fırat-İnönü Bingöl-İnönü
		Bingöl University	3.011			
		Fırat University	2.757			
		Munzur University	3.226			

*p<.05

According to the results obtained from Table 4, the PB sub-dimension and the entire scale show differences among universities. For the total scale, there are differences between Munzur University and Fırat University, İnönü University and Fırat University, and Bingöl University and İnönü University. For the PB sub-dimension, there are differences between Fırat University and Bingöl University, Fırat University and Tunceli University, Fırat University and İnönü University, and Bingöl University and İnönü University. The average scores of the universities with significant differences were examined.

For the total scale, Munzur University has a higher average score than Fırat University, İnönü University has a higher average score than Fırat University, and İnönü University has a higher average score than Bingöl University. For the PB sub-dimension, İnönü University has a higher average score than Fırat University and Bingöl University, Munzur University has a higher average score than Fırat University, and Bingöl University has a higher average score than Fırat University.

Table 5. Difference test results of the means of the variables according to the departments: Kuruskal Wallis Test

Varieces	Statistic	Department	X	Sd.	p	Groups
PK	57.575	CE	2.284	4	.000*	PEST-SM PEST-PESD CE-SÖ CE-PESD SM-PESD
		PEST	2.260			
		PESD	3.257			
		SM	2.710			
PI	6.171	CE	3.830	4	.286	p>0.05
		PEST	3.756			
		PESD	4.101			
		SM	3.872			
Total	43.748	CE	2.928	4	.000*	PEST-SM PEST-PESD CE-SM CE-PESD SM-PESD
		PEST	2.883			
		PESD	3.608			
		SM	3.194			

*p<.05

Regarding the departments of Coaching Education (CE), Physical Education and Sports Teaching (PEST), Physical Education and Sports on Disabilities (PESD), and Sports Management (SM) in terms of the total Paralympic awareness scores, PK, and PI sub-dimensions of sports science students, a normality test was conducted. Kolmogorov-Smirnov normality tests were performed for three groups with a sample size greater than 50. According to the normality test results, it was observed that the data did not follow a normal distribution. Hence, the Kruskal Wallis Test, a non-parametric test, was employed for intergroup comparisons. According to the results obtained from Table 5, there are significant differences in the university departments in terms of the total scale and PK sub-dimensions. For the variables where the difference was found to be significant, the mean scores were examined. Accordingly, for the total scale, the PESD Department has higher mean scores than the other departments, and the SM Department has higher mean scores than the CE and PEST Departments. For the PK sub-dimension, the PESD Department has higher mean scores than all other departments, and the SM Department has higher mean scores than the CE and PEST Departments.

Table 6. Difference test results of the means of variables according to classes: Kuruskal Wallis Test

Varieces	Statistic	Classes	X	Sd.	p	Groups
PK	28.485	1st Year	2.424	3	.000*	2nd Class-3th Class 2nd Class-4th Class 1st Class-3th Class 1st Class-4th Class
		2nd Year	2.292			
		3th Year	2.865			
		4th Year	2.790			
PI	10.454	1st Year	3.618	3	.015*	1st Class-4th Class
		2nd Year	3.895			
		3th Year	3.869			
		4th Year	4.114			
Total	27.943	1st Year	2.922	3	.000*	2nd Class-3th Class 2nd Class-4th Class 1st Class-3th Class 1st Class-4th Class
		2nd Year	2.960			
		3th Year	3.283			
		4th Year	3.342			

*p<.05

According to the results obtained from Table 6, significant differences are observed among certain variables concerning university classes. For variables where the difference is deemed significant, the mean scores were examined. Accordingly, for the scale total, 3rd and 4th-year classes have higher mean scores compared to 1st and 2nd-year classes. For the PK subscale, 3rd and 4th-year classes have higher mean scores compared to 1st and 2nd-year classes. For the PI subscale, 4th-year classes have higher mean scores compared to 1st-year classes.

Table 7. Difference Test Results of Means of Variables According to the Status of Having a Relatives with Disabilities: Mann Whitney U Testi

		PK	PI	Total
Mann-Whitney U		40180.000	41513.50	38908.000
ASMmp. Sig. (2-tailed)		.032*	.127	.006*
Mean	Yes	2.670	2.472	3.216
	No	2.472	3.981	2.989

*p<.05

According to the results in Table 7, the scores of the PK and total scale variables differ depending on whether there is a disabled relative or acquaintance. It is observed that those with disabled relatives or acquaintances have higher average scores in the differing PK and total scale variables compared to those without.

Table 8. Difference Test Results of Means of Variables According to Experience of Working with Disabled Individuals: Mann Whitney U Test

		PK	PI	Total
Mann-Whitney U		32178.50	33501.00	30366.000
ASMmp. Sig. (2-tailed)		.000*	.001*	.000*
Mean	Yes	2.830	4.087	3.354
	No	2.435	3.722	2.971

*p<.05

According to the results in Table 8, the PK, PI, and total scale variables show variations depending on the experience of working with disabled individuals. In variables exhibiting differences, it is observed that individuals with experience working with disabled individuals have higher average scores compared to those without such experience.

Table 9. Difference Test Results of the Means of the Variables According to the Status of Taking Courses for the Disabled: Mann Whitney U Test

		PK	PI	Total
Mann-Whitney U		38466.000	40091.500	37145.000
ASMmp. Sig. (2-tailed)		.004*	.034*	.000*
Mean	Yes	2.708	3.968	3.233
	No	2.448	3.739	2.986

*p<.05

According to the results in Table 9, the PK, PI, and total scale variables exhibit significant differences based on the status of taking courses related to disabled individuals. In all variables showing differences, it is observed that students who have taken courses related to disabled individuals have higher average scores compared to those who have not.

Tablo 10. Results of the Difference Test of Means for Variables According to the Desire to Work with Disabled Individuals: Kruskal-Wallis Test

Variences	Statistic	X		Sd.	p	Groups
PK	14.117	Yes	2.677	2	.001*	No-Not sure Yes-No
		No	2.024			
		Not sure	2.447			
PI	18.387	Yes	3.975	2	.000*	Yes-Not sure Yes-No
		No	3.147			
		Not sure	3.708			
Total	28.039	Yes	3.218	2	.000*	Yes-Not sure No-Not sure Yes-No
		No	2.492			
		Not sure	2.972			

*p<.05

According to the results in Table 10, significant differences have been observed in PK, PI, and total scale variables based on the desire to work with disabled individuals. In all variables showing differences, it is observed that students who express a willingness to work with disabled individuals have higher average scores compared to those who do not or are undecided.

DISCUSSION

Data related to Paralympic awareness among sports science students from four different departments at four universities in the TRB1 region were evaluated within the scope of the research. In this context, analyses were conducted to examine the status of sports science students in terms of their total Paralympic scale scores and the Paralympic knowledge and interest sub-dimensions based on demographic questions. The findings revealed the presence of some significant differences. Significant differences were observed in the total scale scores and the Paralympic knowledge sub-dimension of sports science students according to age groups. When examining the mean scores of the relevant variables among age groups with significant differences, for the total scale and Paralympic knowledge sub-dimension; the 25+ age group has a higher average score than the 17-20 age group. In line with these results, it has been noted that age is a significant factor in raising awareness and attitudes towards disabled sports activities among students in the PEST department (Yıldırım & Yüksel, 2022). However, there are also studies indicating that age is not an effective variable in attitudes towards individuals with disabilities or their sports activities. For example, studies involving SM department students and separate studies involving physical education teachers have shown that age is not an effective factor in the awareness of individuals with intellectual disabilities in sports activities (Altınışık et al., 2021; Yaşın & İlhan, 2021). Furthermore, for sports science students and special education teachers, there was no significant age difference in attitudes towards disabled sports activities (Baş et al., 2021).

In terms of gender, it was found that the Paralympic interest variable significantly differed among sports science students, with females having higher averages. However, there were no significant gender differences in Paralympic knowledge and the overall scale. Another study also found that attitudes towards individuals with disabilities in sports participation favored females, and this gender difference was significant (Dursun et al., 2019). Various other studies have shown that female students in sports management departments and physiotherapy departments have higher awareness levels regarding the sports activities of mentally disabled individuals (Altınışık et al., 2021; Çar et al., 2019). In a study conducted with primary education, special education, and physical education teachers, it was also observed that females had higher awareness scores regarding disabled sports activities (Hüseyin et al., 2016). These findings support the result obtained for the Paralympic Interest sub-dimension in our study.

When examining the universities in terms of Paralympic awareness among sports science students within the scope of the research, for the entire scale where significant differences were found; Munzur University has a higher average

score than Fırat University, İnönü University has a higher average score than Fırat University, and İnönü University has a higher average score than Bingöl University. For the Paralympic knowledge sub-dimension; İnönü University has a higher average score than Fırat and Bingöl Universities, Munzur University has a higher average score than Fırat University, and Bingöl University has a higher average score than Fırat University. It is believed that the reason for İnönü University having higher average scores in the comparisons where significant differences were found might be related to the presence of the PESD department in the faculty. This is because, when looking at the average scores for departments, it is observed that the highest scores belong to PESD department students.

When examining whether there are differences among departments in terms of Paralympic awareness of sports science students, for the entire scale in which significant differences were observed; the PESD department has higher average scores than other departments, and the SM department has higher average scores than CE and PEST departments. For the Paralympic knowledge sub-dimension; the PESD department has higher average scores than all other departments, and the SM department has higher average scores than CE and PEST departments. Studies involving departments as a variable have shown that the departments of special education and physical education teachers are effective factors in attitudes towards disabled individuals' sports activities (Baş et al., 2021). In another study, nursing students from different departments had significantly different attitudes towards individuals with disabilities based on their departments (Uysal et al., 2014). These results are in line with our study findings.

In terms of classes, significant differences were observed in the entire scale, Paralympic Interest, and Paralympic Knowledge for Paralympic awareness of sports science students. According to this, for Paralympic awareness; 3rd and 4th-year students have higher average scores than 1st and 2nd-year students. For Paralympic knowledge; 3rd and 4th-year students have higher average scores than 1st and 2nd-year students. For Paralympic interest; 4th-year students have higher average scores than 1st-year students. There are studies both showing (Thompson et al., 2003) and not showing (Başkonuş & Akdal, 2021; Gülünay et al., 2009; Sarı et al., 2010; Yıldırım & Yüksel, 2022) that university students' attitudes towards individuals with disabilities vary significantly depending on their class levels. Another study indicates that awareness of doctoral candidates towards individuals with disabilities increases as their class levels rise (Kemeç et al., 2018). While our study results suggest that the class is a factor affecting Paralympic awareness, it is also considered that there may be contradictory results.

When examining whether there are differences in Paralympic awareness among sports science students based on the presence of a disabled family member, significant differences were observed in the entire scale and the Paralympic knowledge sub-dimension in favor of students with a disabled family member. Previous research has also shown that individuals who have contact with disabled individuals or have disabled individuals in their families or relatives tend to have more positive attitudes towards disabled individuals (Armstrong et al., 2016; Favazza et al., 2000; Kalyva & Agaliotis, 2009; Shalev et al., 2016). Additionally, it has been observed that students from the PEST and SM departments in sports science, who have family members or relatives with disabilities, have higher awareness of disabled individuals' sports activities (Altınışık et al., 2021; Yıldırım & Yüksel, 2022). These results also support the findings of our study.

When examining whether there are differences in Paralympic awareness among sports science students based on their experience of working with disabled individuals, significant differences were observed in the entire scale and both sub-dimensions in favor of students with experience working with disabled individuals. Some previous research has also shown that working with disabled individuals positively influences attitudes towards disabled individuals (Blackwell, 1972; Diken & Sucuoğlu, 1999; Hanrahan et al., 1990). This suggests that the experience of working with disabled individuals may also increase the level of knowledge and

interest in Paralympic sports among sports science students.

In terms of whether sports science students have taken a course on disabilities, tests were conducted, and significant differences were observed in the entire scale and sub-dimensions in favor of students who have taken courses on disabilities. Many studies support these results (Akbuğa & Gürsel, 2007; Şahin & Güldenoğlu, 2013). In separate studies evaluating students from the SM and PEST departments based on the variable of taking courses or receiving education on disabilities, it was statistically determined that participants who took courses or received education had a significant advantage (Altınışık et al., 2021; Kırımoğlu et al., 2016).

In the recent test results, when examining whether there are differences in Paralympic awareness among sports science students based on their willingness to work with disabled individuals, significant differences were again observed in the entire scale and both sub-dimensions in favor of students who expressed a desire to work with disabled individuals. Various results exist in the literature to evaluate this situation. For instance, it has been reported that 766 university students tend to be more distant towards individuals with intellectual disabilities compared to other types of disabilities (Huskin et al., 2018), or in a study involving 238 university students, it was expressed that students were more interested in establishing contact with physically disabled individuals compared to individuals with behavioral problems (Barr & Bracchitta, 2015). In a study involving 72 physical education teachers to assess their attitudes toward the inclusion of disabled students in education, it was found that teachers had moderately positive attitudes towards the inclusion of disabled students. It was concluded that there is a need to optimize inclusive education and implement practical programs involving interaction with disabled students (García & González, 2021). Based on these results, it can be considered that a prejudice towards disabled individuals may influence the Paralympic awareness of sports science students.

Conclusion

Within the scope of this study, data related to sports science students' Paralympic awareness were evaluated based on demographic characteristics, revealing significant differences among groups. Although there are contrasting results in the literature regarding whether age is an effective factor, in this research, it is observed that increasing age is particularly associated with higher levels of Paralympic awareness. While there is a significant difference in the Paralympic interest sub-dimension based on gender, no significant difference is observed in the Paralympic knowledge dimension. When examined for different universities and departments, it is found that the total Paralympic awareness scale and the Paralympic knowledge sub-dimension variable significantly differ. This is attributed to the higher average scores in the categories where students from the Department of Adapted Physical Education and Sports are present when looked at departments.

At the class level, it is seen that higher classes have significantly higher scores in Paralympic awareness, Paralympic knowledge sub-dimension, and Paralympic interest sub-dimension variables. Regarding the presence of a disabled relative or acquaintance, significant differences in the entire Paralympic awareness scale and the Paralympic knowledge sub-dimension are observed in favor of those who have a disabled acquaintance. Similarly, both the entire scale and sub-dimensions show significant differences in favor of those who have experience working with disabled individuals. Likewise, those who have taken courses related to disabled individuals and those who express a desire to work with disabled individuals have significant advantages in both the entire scale and sub-dimensions.

In conclusion, the results of this study highlight the necessity for an increase in studies evaluating the perception levels of sports science students regarding the Paralympic Games. Assessing the perception levels of sports science students from different regions about the Paralympic Games can provide valuable information contributing to this field. Thus,

increasing the awareness of sports science students studying in Turkey about the Paralympic Games may positively influence their attitudes toward disabled individuals. Furthermore, high perception levels of sports science students who may work with disabled athletes after graduation can contribute to Turkey's success in disabled sports.

Finally, the increase in institutions in our country that train sports educators for disabled individuals can enhance sports science students' interest and knowledge in disabled sports and positively influence their attitudes toward disabled individuals.

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Conflict of interest

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Ethics Committee

The study was approved by the İnönü University Scientific Research and Publication Ethics Committee on 16-11-2021 with decision number 2021/2617.

Author Contributions

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

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