

An examination of the personality traits and sense of humour of Paralympic athletes

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Abstract

The aim of this study is to examine the personality traits and humour styles of Paralympic athletes. The relational screening model was used in the study, and 292 Paralympic athletes were evaluated. The basic personality traits scale and humour styles scale were applied in the study. In the findings, while significant differences were detected in the sub-dimensions and total scores of the basic personality traits scale of Paralympic athletes in terms of gender, age, type of physical disability, degree of disability, sports branch, and sports background variables, no significant difference was detected in terms of the variables of education status and being a national athlete or not. While significant differences were detected in the sub-dimensions and total scores of the humour styles scale in terms of education status, sports branch, being a national athlete or not, and sports background variables, no significant difference was detected in terms of the variables of gender, type of physical disability, and degree of disability. In the study, it was concluded that, as per the sports branches the athletes participate in, the athletes' personality traits and humour styles are effective in their personality development, that the non-national athletes adopt a self-enhancing humour style, and that the sports background is effective on personality traits and humour styles. In the relevance between personality traits and humour styles, it was inferred that athletes with an affiliative humour style exhibit positive personality traits, while athletes exhibiting negative personality traits tend to adopt self-defeating and aggressive humour styles.

Keywords: Paralympic athlete, personality trait, humour style.

1. Introduction

Personality traits are fundamental elements that shape individuals' behaviours, attitudes, and emotional responses. These traits directly influence how people express themselves and

interact with their environment. They also play an important role in the formation and development of an individual's sense of humour (Chetna et al., 2023; Plessen et al., 2020; Mendiburo-Seguel et al., 2015). Personality traits generally reflect the dynamics of an individual's inner world and how they adapt to social environments. For this reason, different personality traits, such as extraversion, conscientiousness, and agreeableness, emerge as fundamental factors that determine sense of humour and its use. Personality structure and humour styles are mutually interactive and have a significant effect on individuals' social life and psychological well-being. Additionally, humour is an effective tool for coping with stress and anxiety, and it can facilitate dialogue in social settings (Cann et al., 2010; Ruch & Heintz, 2014). Therefore, understanding the influence of personality traits on humour styles is important for both individual development and social adaptation.

The examination of the relevance between the personality traits of Paralympic athletes and their sense of humour is an important area for understanding the psychological and social dynamics of individuals. In addition, the fact that the sense of humour of Paralympic athletes is related to their different personality traits in terms of learning and development processes is a factor that coaches and psychologists should consider. In this context, personality traits shape individuals' behavioural patterns and communication styles, thereby influencing their humour styles (Alexander-Urquhart et al., 2024; Judge et al., 2024). However, the experiences and challenges faced by Paralympic athletes are closely related to the psychological effects of humour (Liu et al., 2025). Studies have shown that Paralympic athletes may perceive more negative effects on their training and performance due to factors such as self-confidence (Clemente-Suárez et al., 2020). These athletes face unique stressors that may affect their psychological well-being, such as trauma and the relevance between sport and personal identity (Swartz et al., 2019). Studies emphasize the importance of psychological aspects not only during training but also at the elite level for Paralympic athletes, highlighting the importance of mental well-being in their athletic journey (Rodríguez Macías et al., 2023).

The personality structures of Paralympic athletes are shaped by the interaction of genetic, environmental, and psychosocial factors. They are also observed to be linked to critical elements that affect sports performance, such as motivation, resilience, and adaptability (Kokun et al., 2021; Rougeau et al., 2025). The relevance between personality traits and humour styles provides important clues for understanding the Paralympic athletes' social interactions and ways of expressing themselves. However, when individual differences are considered, it can be stated that they will be reflected in humour styles and unfold in terms of communication and social interaction. Humour's functions, such as psychological healing, bonding, and stress reduction, play a critical role in athletes' quality of life and social relationships (Judge et al., 2024). Therefore, the interaction between personality traits and humour styles emerges as a topic worthy of research. Humour styles, as determined in various studies, encompass different dimensions that may or may not be compatible with their effects on individuals' social interactions and coping mechanisms (Kuiper and Leite, 2010; Fritz, 2022; Rieger and McGrail, 2015). Adaptive humour styles of affiliative and self-enhancing humour styles have been associated with improved psychological well-being and positive social interactions (Mendiburo-Seguel et al., 2015; Kokkinos et al., 2022). On the other hand, maladaptive humour styles of aggressive and self-defeating humour styles have been associated with poorer psychological health and harmful effects on individuals and social interactions (Mendiburo-Seguel et al., 2015; Kokkinos et al., 2022).

Understanding how humour styles intersect with personality traits in the context of Paralympic athletes can provide insight into their coping strategies, social interactions, and overall mental health. This is because basic personality traits have been found to be related to the humour styles the individuals adopt (Zeigler-Hill, McCabe & Vrabel, 2016). Research shows that affiliative and self-enhancing humour styles are positively associated with

extraversion, openness to experience, greater flexibility, imagination, and problem-solving abilities (Akdur & Durak Batıgün, 2017). This circumstance suggests that humour styles play an important role in helping individuals, including professional athletes, in coping with challenges, maintaining their mental health, and shaping their personalities. The literature includes studies on personality traits and humour styles (Younas & Zahra, 2024; Nishad & Gwalani, 2021; Çelik, 2020). However, these studies have focused on young people, university students, and athletes, and not on Paralympic athletes. This fact highlights the importance of this study.

Therefore, the main objective of this study is to determine how the personality structures of Paralympic athletes are reflected in their sense of humour and their adoption of humour. In this context, the aim is to reveal the effects of humour on the psychological resilience, social relationships, and overall quality of life of Paralympic athletes. Additionally, the findings of this study will contribute to the development of psychosocial support programs for these athletes and of applications in the field of sports psychology, thereby helping to create strategies that can have a positive impact on athletes' lives. In this sense, the study aims to examine the personality traits and humour styles of Paralympic athletes.

2. Methodology

2.1. Research model

In the study, the relational survey model, one of the quantitative research methods, was used to examine the relevance between personality traits and humour styles of Paralympic athletes (Karasar, 2014). The aim of survey research is expressed as describing the characteristics of a group (Büyüköztürk et al., 2017).

2.2. Participants

The population of the study consisted of licensed and physically disabled athletes. The sample consisted of a total of (n=292) volunteer disabled athletes (183 men and 109 women) who were licensed in wheelchair basketball, swimming, archery, athletics, boccia, wheelchair tennis, table tennis, wheelchair curling, and amputee football branches. Convenience sampling, a non-probability sampling method, was used in the study. Convenience sampling collects data from individuals who are willing to participate in a study, are most accessible, or are otherwise easily accessible to the researcher (Büyüköztürk et al., 2016). The demographic variables of the participants are shown in Table 1.

Table 1. Demographic variables of the participants

Variables	N	%	
Gender	Male ¹	183	62.67%
	Female ²	109	37.32%
Age	18-20 ¹	58	19.86%
	21-23 ²	71	24.31%
	24-26 ³	39	13.35%
	27-29 ⁴	47	16.09%
	30 and above ⁵	77	26.36%
Education status	Primary Education ¹	58	19.86%
	Secondary Education ²	101	34.58%
	Higher Education ³	133	45.54%
Type of physical disability	Amputee ¹	71	24.31%
	Polio ²	45	15.41%
	Muscular Dystrophy ³	47	16.09%
	Spina Bifida ⁴	78	26.71%
	Spinal Cord Injury ⁵	51	17.46%
Degree of disability	40-59% ¹	84	28.76%
	60-80% ²	77	26.36%
	81% and above ³	131	44.86%
Sports branch	Amputee Football ¹	30	10.27%
	Athletics ²	34	11.64%
	Boccia ³	31	10.61%
	Table Tennis ⁴	34	11.64%
	Archery ⁵	31	10.61%
	Wheelchair Basketball ⁶	36	12.32%
	Wheelchair Curling ⁷	33	11.30%
	Wheelchair Tennis ⁸	31	10.61%
	Swimming ⁹	32	10.95%
National athlete or not	Yes ¹	153	52.39%
	No ²	139	47.60%
Sports background	Below 3 ¹	88	30.13%
	3-6 years ²	133	45.54%
	7 years and above ³	71	24.31%

2.3. Data collection

In the study, in order to examine the relevance between personality traits and humour styles of Paralympic athletes, the research data were collected using the personal information form created by the researchers, the “basic personality traits scale” adapted into Turkish by Gençöz and Öncül (2012), and the “2.4.3. The Humour Styles Questionnaire” adapted into Turkish by Yerlikaya (2003) as an online Google form. The disabled athletes participating in the study were informed about the study protocol, and the necessary approvals and permissions were obtained for the voluntary participation of the athletes in the study.

2.4. Data collection tools

2.4.1. Demographic information

The demographic information form consisting of 8 questions on the variables of gender, age, education status, type of physical disability, degree of disability, sports branch, sports background, and being a national athlete or not was used.

2.4.2. Basic Personality Traits Scale

The Basic Personality Traits Inventory, developed by McCrae and Costa (2003), is a scale that aims to evaluate the basic personality traits of individuals based on the five-factor personality model. The scale, which was adapted into Turkish by Gençöz and Öncül (2012), is a 5-point Likert scale and consists of a total of 45 items and 6 factors expressed as extraversion, conscientiousness, agreeableness, neuroticism, openness to experience, and negative valence, respectively. The items are scored between (1) “not at all appropriate” and (5) “highly appropriate.” The 6th, 7th, 21st, 22nd, 24th, 32nd, 38th, and 39th items in the scale are reverse scored (Gençöz & Öncül, 2012).

2.4.3. The Humour Styles Questionnaire

The Humour Styles Questionnaire, Martin, Puhlik-Doris, Larsen, Gray, and Weir (2003) updated the questionnaire and reduced the number of questions to 32. The scale was adapted into Turkish, and validity and reliability studies were conducted by Yerlikaya (2003). The Humour Styles Questionnaire is a 7-point Likert scale consisting of 32 questions and 4 factors. Each item in the 7-point Likert scale is scored between (1) Strongly Disagree and (7) Strongly Agree. Each factor consists of 8 items. The question distributions of the factors are as per Affiliative Humour Style (1, 5, 9, 13, 17, 21, 25, 29), Self-Enhancing Humour Style (2, 6, 10, 14, 18, 22, 26, 30), Aggressive Humour Style (3, 7, 11, 15, 19, 23, 27, 31), and Self-Defeating Humour Style (4, 8, 12, 16, 20, 24, 28, 32). In the scale, 11 items (1, 7, 9, 15, 16, 17, 22, 23, 25, 29, 31) are reverse scored. The minimum and maximum scores that can be obtained from each factor vary between 7 and 56. The high scores obtained from the factors indicate the frequency of use of the related humour style (Yerlikaya, 2003).

2.5. Statistical analysis

The data obtained from the personal information form and scales were analyzed using the open-source Jamovi statistical program. The suitability of the data for normal distribution was examined through normal distribution curves, skewness-kurtosis values, and histograms, and the Kolmogorov-Smirnov test was used since the population was larger than 50. It was determined that the data did not show normal distribution, and the Mann-Whitney U test, one of the non-parametric tests, and the Kruskal-Wallis test were applied for the analysis of questions with three or more variables. In order to prevent type I and type II errors that may arise from pairwise comparisons, the new significance level was determined using the Bonferroni correction method. In addition, Spearman’s correlation test was applied to determine the relevance between the participants’ scores on the Basic Personality Traits Scale and the Humour Styles Questionnaire. The significance level was taken as 0.05 in the statistical analysis of the data.

3. Results

Table 2. Descriptive statistics of the participants' scores from the scales

	Sub-dimensions	N	\bar{x}	Min	Max	sd
Basic Personality Traits Scale	Extraversion	292	30.66	17	40	6.76
	Conscientiousness	292	33.07	16	40	4.07
	Agreeableness	292	34.26	8	40	4.13
	Neuroticism	292	20.22	9	32	4.81
	Openness to experience	292	20.39	5	25	2.98
	Negative valence	292	8.90	6	18	2.93
	Total	292	147.50	76	179	11.92
Humour Styles Scale	Self-enhancing humour	292	37.62	14	56	8.81
	Affiliative humour	292	40.27	28	55	6.69
	Self-defeating humour	292	26.29	12	53	8.51
	Aggressive humour	292	23.58	9	39	6.16
	Total	292	127.75	73	176	20.70

When Table 2 is examined, the participants' mean scores for extraversion, conscientiousness, agreeableness, neuroticism, openness to experience, negative valence, and their total score were found to be 30.66, 33.07, 34.26, 20.22, 20.39, 8.90, and 147.50. In the Humour Styles Scale, the participants' mean score for self-enhancing humour style was 37.62, for affiliative humour style was 40.27, for self-defeating humour style was 26.29, for aggressive humour style was 23.58, and their total score was 127.75.

Table 3. Kolmogorov-Smirnov test, Shapiro-Wilk test, and skewness and kurtosis significance level results of the participants' scores in the scales

	Sub-dimensions	Kolmogorov-Smirnov	Skewness	Kurtosis
Basic Personality Traits Scale	Extraversion	0.00	-0.49	-1.08
	Conscientiousness	0.00	-0.48	1.34
	Agreeableness	0.00	-1.71	9.51
	Neuroticism	0.00	-0.61	-0.11
	Openness to experience	0.00	-0.78	3.26
	Negative valence	0.00	1.24	1.08
	Total	0.00	-1.16	7.52
Humour Styles Scale	Self-enhancing humour	0.00	-0.13	-0.28
	Affiliative humour	0.00	0.16	-0.22
	Self-defeating humour	0.00	0.30	-0.17
	Aggressive Humour	0.00	0.55	-0.55
	Total	0.00	-0.03	-0.20

When Table 3 is examined, the data was evaluated with the Kolmogorov-Smirnov test of normality and with the skewness and kurtosis values before analyzing the independent

variables that could have affected the study. In addition, histogram and Q-Q plot views were analyzed. It was decided that non-parametric tests were appropriate for the data of the “Basic Personality Traits Scale” and “Humour Styles Scale.”

Table 4. Comparison of participants’ scores in the scales according to the gender variable

	Sub-dimensions	Gender	N	Percentages			U	P
				Q1	Q2	Q3		
Basic Personality Traits Scale	Extraversion	Male ¹	183	24.00	32.00	37.00	9703.00	0.698
		Female ²	109	26.00	32.00	36.00		
	Conscientiousness	Male ¹	183	31.00	33.00	36.00	9544.50	0.537
		Female ²	109	31.00	33.00	35.00		
	Agreeableness	Male ¹	183	32.00	34.00	38.00	9698.50	0.692
		Female ²	109	32.00	34.00	36.00		
	Neuroticism	Male ¹	183	17.00	21.00	24.00	9124.50	0.222
		Female ²	109	19.00	21.00	24.00		
	Openness to experience	Male ¹	183	18.00	21.00	23.00	8587.00	0.045
		Female ²	109	18.00	20.00	22.00		
	Negative valence	Male ¹	183	7.00	8.00	11.00	8472.00	0.029
		Female ²	109	6.00	8.00	9.00		
Total	Male ¹	183	140.00	147.00	157.00	9548.50	0.542	
	Female ²	109	141.00	147.00	154.00			
Humour Styles Scale	Self-enhancing humour	Male ¹	183	31.50	39.00	46.00	9438.00	0.442
		Female ²	109	32.00	37.00	43.00		
	Affiliative humour	Male ¹	183	35.00	41.00	45.00	9200.50	0.267
		Female ²	109	35.00	39.00	43.00		
	Self-defeating humour	Male ¹	183	19.00	26.00	34.00	9230.50	0.286
		Female ²	109	20.00	26.00	29.00		
	Aggressive humour	Male ¹	183	19.00	23.00	29.00	9759.50	0.758
		Female ²	109	19.00	23.00	25.00		
	Total	Male ¹	183	118.00	127.00	144.00	9061.50	0.190
		Female ²	109	118.00	122.00	141.00		

When Table 4 is examined, considering the participants’ scores in the scales according to the gender variable, a significant difference was found in favour of male participants in the sub-dimensions of openness to experience (U=8587.00, p<.05) and negative valence (U=8472.00, p<.05) of the Basic Personality Traits Scale. There was no statistically significant difference between the population in the other sub-dimensions of the referred scale and in the Humour Styles Scale (p>.05).

Table 5. Comparison of the participants’ scores in the scales according to the age variable

	Sub-dimensions	Age	N	\bar{x}	sd	χ^2	p	Difference
21-23 ²	71	26.83	2-4					
24-26 ³	39	32.38	2-3					
27-29 ⁴	47	28.09	2-5					
30 and above ⁵	77	34.14	4-5					
Conscientiousness	18-20 ¹	58	34.48	4	17.12	0.02	1-2	
	21-23 ²	71	32.14				1-4	
	24-26 ³	39	32.69					

		27-29 ⁴	47	32.13				
		30 and above ⁵	77	33.61				
	Agreeableness	18-20 ¹	58	35.53	4	14.65	0.03	1-2
		21-23 ²	71	33.01				
		24-26 ³	39	34.33				
		27-29 ⁴	47	33.19				
		30 and above ⁵	77	35.05				
	Neuroticism	18-20 ¹	58	20.47	4	45.23	0.00	1-2 2-5 3-5 4-5
		21-23 ²	71	22.06				
		24-26 ³	39	19.46				
		27-29 ⁴	47	21.83				
		30 and above ⁵	77	17.73				
	Openness to experience	18-20 ¹	58	21.79	4	26.32	0.01	1-2 1-4 2-5
		21-23 ²	71	19.17				
		24-26 ³	39	20.41				
		27-29 ⁴	47	20.06				
		30 and above ⁵	77	20.66				
	Negative valence	18-20 ¹	58	8.53	4	5.53	0.23	-
		21-23 ²	71	9.45				
		24-26 ³	39	8.15				
		27-29 ⁴	47	10.17				
		30 and above ⁵	77	8.27				
	Total	18-20 ¹	58	152.48	4	28.10	0.00	1-2 1-4 2-5 4-5
		21-23 ²	71	142.66				
		24-26 ³	39	147.44				
		27-29 ⁴	47	145.47				
		30 and above ⁵	77	149.47				
Humour Styles Scale	Self-enhancing humour	18-20 ¹	58	40.86	4	11.03	0.04	1-2
		21-23 ²	71	35.06				
		24-26 ³	39	37.64				
		27-29 ⁴	47	37.57				
		30 and above ⁵	77	37.56				
	Affiliative humour	18-20 ¹	58	41.55	4	21.01	0.02	1-2 1-4 2-4
		21-23 ²	71	37.90				
		24-26 ³	39	43.15				
		27-29 ⁴	47	38.60				
		30 and above ⁵	77	41.04				
	Self-defeating humour	18-20 ¹	58	24.28	4	47.16	0.00	1-4 2-4 3-4 4-5
		21-23 ²	71	23.20				
		24-26 ³	39	26.28				
		27-29 ⁴	47	32.45				
		30 and above ⁵	77	26.90				
	Aggressive humour	18-20 ¹	58	22.40	4	8.46	0.09	-
		21-23 ²	71	23.35				
		24-26 ³	39	24.26				
		27-29 ⁴	47	24.81				
		30 and above ⁵	77	23.58				
Total	18-20 ¹	58	129.09	4	22.55	0.02	2-3 2-4	
	21-23 ²	71	119.51					
	24-26 ³	39	131.33					
	27-29 ⁴	47	133.43					
	30 and above ⁵	77	129.08					

When Table 5 is examined, considering the participants' scores in the scales according to the age variable, a significant difference was found in the Basic Personality Traits Scale's "extraversion, conscientiousness, agreeableness, neuroticism, and openness to experience" sub-dimensions and in its total score. There was a significant difference between the 18-20 age group and the 21-23 age group in the extraversion sub-dimension. In addition, significant differences were also observed between the 24-26 age group and other age groups. In the conscientiousness sub-dimension, a significant difference was found between the 18-20 and 21-23 age groups and between the 18-20 and 27-29 age groups. In the agreeableness sub-dimension, there was a significant difference between the 18-20 and 21-23 age groups in favour of the former. In the neuroticism sub-dimension, there were significant differences between the 18-20 age group and the 21-23 and 30 and above age groups. In the openness to experience sub-dimension, the 18-20 age group had the highest score, while the 21-23 age group had the lowest score. These findings reveal that there were significant differences in personality traits and attitudes as per age groups. Significant differences were found between the groups under the self-enhancing humour style, affiliative humour style, and self-defeating humour style sub-dimensions, and under the total scores. According to these results, it was uncovered that there were differences in the affiliative humour style levels of young athletes. It was understood that there was a significant difference between the 18-20 age group and the 21-23 age group and that the 18-20 age group had lower affiliative humour style scores than the 21-23 age group. In the self-defeating humour style sub-dimension, the 27-29 age group scored higher than the other age groups in terms of mean scores. In the self-enhancing humour style sub-dimension, it was found that the 18-20 age group had the highest mean scores.

Table 6. Comparison of the participants' scores in the scales according to the education status variable

	Sub-dimensions	Education Status	N	\bar{x}	sd	x^2	p	Difference
Basic Personality Traits Scale	Extraversion	Primary education ¹	58	30.95	2	1.25	0.53	
		Secondary Education ²	101	30.10				
		Higher Education ³	133	30.97				
	Conscientiousness	Primary education ¹	58	32.50	2	4.41	0.11	
		Secondary Education ²	101	33.68				
		Higher Education ³	133	32.84				
	Agreeableness	Primary education ¹	58	34.10	2	4.89	0.08	
		Secondary Education ²	101	35.07				
		Higher Education ³	133	33.71				
	Neuroticism	Primary education ¹	58	19.43	2	2.71	0.25	
		Secondary Education ²	101	20.68				
		Higher Education ³	133	20.20				

Humour Styles Scale	Openness to experience	Primary education ¹	58	20.43	2	2.20	0.33
		Secondary Education ²	101	20.82			
		Higher Education ³	133	20.05			
	Negative valence	Primary education ¹	58	8.67	2	1.05	0.59
		Secondary Education ²	101	8.96			
		Higher Education ³	133	8.95			
	Total	Primary education ¹	58	146.09	2	3.13	0.20
		Secondary Education ²	101	149.32			
		Higher Education ³	133	146.73			
	Self-enhancing humour	Primary education ¹	58	38.24	2	4.23	0.12
		Secondary Education ²	101	38.60			
		Higher Education ³	133	36.60			
	Affiliative humour	Primary education ¹	58	39.28	2	0.81	0.66
		Secondary Education ²	101	39.79			
		Higher Education ³	133	41.06			
Self-defeating humour	Primary education ¹	58	26.12	2	17.47	0.00	3-2
	Secondary Education ²	101	23.93				
	Higher Education ³	133	28.15				
Aggressive humour	Primary education ¹	58	24.21	2	5.09	0.07	
	Secondary Education ²	101	22.56				
	Higher Education ³	133	24.08				
Total	Primary education ¹	58	127.84	2	3.52	0.17	
	Secondary Education ²	101	124.89				
	Higher Education ³	133	129.89				

When Table 6 is examined, considering the participants' scores in the scales according to the education status variable, no significant difference was found in the sub-dimensions and total scores of the Basic Personality Traits Scale ($p > .05$). In the self-defeating humour style (χ^2 ($sd=2$, $n=292$) = 17.47, $p < 0.05$) sub-dimension of the Humour Styles Scale, a significant

difference was found between the secondary and higher education groups in favour of the latter. In the Humour Styles Scale, no statistically significant difference was found in other sub-dimensions and total scores ($p>.05$).

Table 7. Comparison of the participants' scores in the scales according to the type of physical disability variable

Sub-dimensions	Type of physical disability	N	\bar{x}	sd	χ^2	p	Difference
	Extraversion	Amputee ¹	71	30.24	4	5.55	0.23
Polio ²		45	32.31				
Muscular Dystrophy ³		47	29.72				
Spina Bifida ⁴		78	30.06				
Spinal Cord Injury ⁵		51	31.59				
Conscientiousness	Amputee ¹	71	33.04	4	29.98	0.00	2-3 3-5 4-5
	Polio ²	45	34.58				
	Muscular Dystrophy ³	47	31.55				
	Spina Bifida ⁴	78	32.17				
	Spinal Cord Injury ⁵	51	34.53				
Agreeableness	Amputee ¹	71	33.58	4	35.66	0.00	1-5 3-5 4-5
	Polio ²	45	35.04				
	Muscular Dystrophy ³	47	33.26				
	Spina Bifida ⁴	78	33.45				
	Spinal Cord Injury ⁵	51	36.67				
Neuroticism	Amputee ¹	71	21.35	4	15.86	0.03	1-2 2-3
	Polio ²	45	17.60				
	Muscular Dystrophy ³	47	21.40				
	Spina Bifida ⁴	78	19.96				
	Spinal Cord Injury ⁵	51	20.24				
Openness to experience	Amputee ¹	71	20.30	4	10.74	0.04	2-3
	Polio ²	45	21.33				
	Muscular Dystrophy ³	47	19.64				
	Spina Bifida ⁴	78	20.01				
	Spinal Cord Injury ⁵	51	20.98				
Negative valence	Amputee ¹	71	9.46	4	6.29	0.17	
	Polio ²	45	8.93				
	Muscular Dystrophy ³	47	8.36				
	Spina Bifida ⁴	78	9.01				
	Spinal Cord Injury ⁵	51	8.41				
Total	Amputee ¹	71	147.97	4	22.32	0.01	2-3 3-5
	Polio ²	45	149.80				

Humour Styles Scale		Muscular Dystrophy ³	47	143.94				4-5
		Spina Bifida ⁴	78	144.67				
		Spinal Cord Injury ⁵	51	152.41				
		Amputee ¹	71	39.30				
		Polio ²	45	36.89				
	Self-enhancing humour	Muscular Dystrophy ³	47	35.89	4	6.84	0.14	
		Spina Bifida ⁴	78	37.54				
		Spinal Cord Injury ⁵	51	37.65				
		Amputee ¹	71	41.48				
		Polio ²	45	40.11				
	Affiliative humour	Muscular Dystrophy ³	47	40.49	4	6.32	0.17	
		Spina Bifida ⁴	78	39.47				
		Spinal Cord Injury ⁵	51	39.73				
		Amputee ¹	71	26.90				
		Polio ²	45	25.82				
	Self-defeating humour	Muscular Dystrophy ³	47	28.40	4	5.38	0.25	
		Spina Bifida ⁴	78	25.32				
		Spinal Cord Injury ⁵	51	25.37				
		Amputee ¹	71	23.14				
		Polio ²	45	24.18				
Aggressive humour	Muscular Dystrophy ³	47	24.66	4	4.70	0.31		
	Spina Bifida ⁴	78	22.54					
	Spinal Cord Injury ⁵	51	24.25					
	Amputee ¹	71	130.82					
	Polio ²	45	127.00					
Total	Muscular Dystrophy ³	47	129.45	4	1.50	0.82		
	Spina Bifida ⁴	78	124.87					
	Spinal Cord Injury ⁵	51	127.00					
	Amputee ¹	71	130.82					
	Polio ²	45	127.00					

When Table 7 is examined, considering the participants' scores in the scales according to the type of physical disability variable, the conscientiousness sub-dimension scores of the athletes with polio were significantly higher than the athletes with muscular dystrophy, and the conscientiousness sub-dimension scores of the athletes with muscular dystrophy and spina bifida were significantly lower than the athletes with spinal cord injury (χ^2 (sd=2, n=292) = 29.98, $p < 0.05$). The agreeableness sub-dimension scores of the amputee athletes and of the athletes with muscular dystrophy and spina bifida (χ^2 (sd=2, n=292) = 35.66, $p < 0.05$) were significantly lower than those of athletes with spinal cord injury. In the neuroticism sub-dimension, the scores of the amputee athletes and of the athletes with polio (χ^2 (sd=2, n=292) = 15.86, $p < 0.05$) were significantly higher than those of athletes with muscular dystrophy. In the openness to experience sub-dimension, the scores of athletes with polio (χ^2 (sd=2, n=292)

= 10.74, $p < 0.05$) were significantly higher than those of athletes with muscular dystrophy. In the total scores, the scores of athletes with polio were significantly higher than those of athletes with muscular dystrophy, and the scores of athletes with muscular dystrophy and spina bifida were significantly lower than those of athletes with spinal cord injury (χ^2 (sd=2, n=292) = 22.32, $p < 0.05$). There was no statistically significant difference in the Humour Styles Scale's sub-dimensions and total scores ($p > .05$).

Table 8. Comparison of the participants' scores in the scales according to the degree of disability variable

	Sub-dimensions	Degree of disability	N	\bar{x}	sd	χ^2	p	Difference
Basic Personality Traits Scale	Extraversion	40-59% ¹	84	30.29	2	0.70	0.70	-
		60-80% ²	77	30.19				
		81% and above ³	131	31.18				
	Conscientiousness	40-59% ¹	84	33.27	2	1.36	0.50	-
		60-80% ²	77	33.22				
		81% and above ³	131	32.84				
	Agreeableness	40-59% ¹	84	34.45	2	10.28	0.04	3-2
		60-80% ²	77	33.27				
		81% and above ³	131	34.71				
	Neuroticism	40-59% ¹	84	20.43	2	0.82	0.66	-
		60-80% ²	77	19.92				
		81% and above ³	131	20.25				
	Openness to experience	40-59% ¹	84	20.83	2	5.11	0.07	-
		60-80% ²	77	19.84				
		81% and above ³	131	20.44				
	Negative valence	40-59% ¹	84	9.85	2	33.49	0.00	1-3 2-3
		60-80% ²	77	9.57				
		81% and above ³	131	7.90				
Total	40-59% ¹	84	149.12	2	3.30	0.19	-	
	60-80% ²	77	146.03					
	81% and above ³	131	147.32					
Humour Styles Scale	Self-enhancing humour	40-59% ¹	84	40.37	2	13.86	0.03	1-2
		60-80% ²	77	35.27				
		81% and above ³	131	37.24				
	Affiliative humour	40-59% ¹	84	40.93	2	5.44	0.07	-
		60-80% ²	77	39.19				
		81% and above ³	131	40.47				
	Self-defeating humour	40-59% ¹	84	26.67	2	0.32	0.85	-
		60-80% ²	77	26.34				
		81% and above ³	131	26.02				
	Aggressive humour	40-59% ¹	84	23.70	2	0.11	0.94	-
		60-80% ²	77	23.10				
		81% and above ³	131	23.78				
	Total	40-59% ¹	84	131.67	2	1.87	0.39	-
		60-80% ²	77	123.91				
		81% and above ³	131	127.50				

When Table 8 is examined, considering the participants' scores in the scales according to the degree of disability variable, it was found that there was a significant difference (χ^2 (sd=2, n=292) = 10.28, $p < 0.05$) in the agreeableness sub-dimension and in the negative valence sub-

dimension (χ^2 (sd=2, n=292) = 33.49, $p < 0.05$) in terms of the scores of individuals with 40-59% and 60-80% disabilities compared to individuals with 81% and above disabilities. When the scores of the Humour Styles Scale were evaluated, it was determined that the self-enhancing humour style scores of individuals with 40-59% disability were significantly higher than those of individuals with 60-80% disability.

Table 9. Comparison of the participants' scores in the Basic Personality Traits Scale according to the sports branch variable

	Sub-dimensions	Sport Branch	N	\bar{x}	sd	χ^2	p	Difference
Basic Perso nality Traits Scale	Extraversion	Amputee Football ¹	30	30.07	8	30.72	0.00	4-9 7-9
		Athletics ²	34	31.21				
		Boccia ³	31	30.45				
		Table Tennis ⁴	34	28.50				
		Archery ⁵	31	32.71				
		Wheelchair Basketball ⁶	36	31.86				
		Wheelchair Curling ⁷	33	27.76				
		Wheelchair Tennis ⁸	31	29.48				
		Swimming ⁹	32	33.97				
		Amputee Football ¹	30	32.40				
		Athletics ²	34	32.71				
		Boccia ³	31	33.00				
	Table Tennis ⁴	34	30.68	4-5				
	Archery ⁵	31	34.06	4-6				
	Wheelchair Basketball ⁶	36	34.08	8	30.89	0.00	4-7 4-8 4-9	
	Wheelchair Curling ⁷	33	33.88					
	Wheelchair Tennis ⁸	31	32.65					
	Swimming ⁹	32	34.13					
	Amputee Football ¹	30	32.47					
	Athletics ²	34	33.82					
	Boccia ³	31	33.13					
	Table Tennis ⁴	34	31.97					
	Archery ⁵	31	35.32	4-6				
	Wheelchair Basketball ⁶	36	35.94	8	39.68	0.00	4-7 4-8 4-9	
	Wheelchair Curling ⁷	33	35.64					
	Wheelchair Tennis ⁸	31	34.94					
	Swimming ⁹	32	34.91					
	Amputee Football ¹	30	19.73					
	Athletics ²	34	21.41					
	Boccia ³	31	20.81	8	24.77	0.00	4-5 4-9 5-7	
	Table Tennis ⁴	34	22.29					
	Archery ⁵	31	16.87					

	Wheelchair Basketball ⁶	36	19.06				
	Wheelchair Curling ⁷	33	21.67				
	Wheelchair Tennis ⁸	31	20.55				
	Swimming ⁹	32	19.34				
	Amputee Football ¹	30	19.40				
	Athletics ²	34	20.56				
	Boccia ³	31	20.19				
	Table Tennis ⁴	34	19.15				
	Archery ⁵	31	21.35				
Openness to experience	Wheelchair Basketball ⁶	36	20.86	8	15.71	0.04	4-5
	Wheelchair Curling ⁷	33	21.03				
	Wheelchair Tennis ⁸	31	19.97				
	Swimming ⁹	32	20.97				
	Amputee Football ¹	30	8.73				
	Athletics ²	34	9.32				
	Boccia ³	31	8.06				
	Table Tennis ⁴	34	8.85				
	Archery ⁵	31	8.71				
Negative valence	Wheelchair Basketball ⁶	36	7.64	8	19.17	0.01	6-7
	Wheelchair Curling ⁷	33	9.97				
	Wheelchair Tennis ⁸	31	10.55				
	Swimming ⁹	32	8.38				
	Amputee Football ¹	30	142.80				
	Athletics ²	34	149.03				
	Boccia ³	31	145.65				
	Table Tennis ⁴	34	141.44				
	Archery ⁵	31	149.03				2-4
Total	Wheelchair Basketball ⁶	36	149.44	8	26.18	0.00	4-7
	Wheelchair Curling ⁷	33	149.94				4-8
	Wheelchair Tennis ⁸	31	148.13				4-9
	Swimming ⁹	32	151.69				

When Table 9 is examined, considering the participants' scores in the scale according to the sports branch variable, a significant difference was found in the Basic Personality Traits Scale's sub-dimensions of "extraversion, conscientiousness, agreeableness, neuroticism, openness to experience, and negative valence" and in its total score. In the extraversion sub-dimension, a significant difference was found between table tennis and swimming, and wheelchair curling and swimming. In the conscientiousness sub-dimension, a significant difference was found between wheelchair tennis and archery, wheelchair tennis and wheelchair basketball, wheelchair tennis and wheelchair curling, and wheelchair tennis and swimming. In the agreeableness sub-dimension, a significant difference was found between

wheelchair tennis and wheelchair basketball, wheelchair tennis and wheelchair curling, and wheelchair tennis and swimming. In the neuroticism sub-dimension, a significant difference was found between wheelchair tennis and archery, wheelchair tennis and swimming, and wheelchair tennis and wheelchair curling. In the openness to experience sub-dimension, a significant difference was found between wheelchair tennis and archery. In the negative valence sub-dimension, a significant difference was found between wheelchair basketball and wheelchair curling. In the total scores obtained from the scale, a significant difference was found between athletics and wheelchair tennis, wheelchair tennis and wheelchair curling, and wheelchair tennis and swimming. These findings indicate that there are significant differences in the personality traits and attitudes of the athletes according to the sports branch variable.

Table 10. Comparison of the participants' scores in the Humour Styles Scale according to the sports branch variable

	Sub-dimensions	Sport Branch	N	\bar{x}	sd	x^2	p	Difference
Humour Styles Scale	Self-enhancing humour	Amputee Football ¹	30	36.60				
		Athletics ²	34	38.76				
		Boccia ³	31	35.26				
		Table Tennis ⁴	34	34.03				
		Archery ⁵	31	41.48				3-5
		Wheelchair Basketball ⁶	36	37.28	8	20.89	0.00	4-5
		Wheelchair Curling ⁷	33	39.79				4-7
		Wheelchair Tennis ⁸	31	37.29				
		Swimming ⁹	32	38.19				
		Affiliative humour	Amputee Football ¹	30	38.67			
	Athletics ²		34	41.56				
	Boccia ³		31	40.81				
	Table Tennis ⁴		34	40.56				
	Archery ⁵		31	41.97				
	Wheelchair Basketball ⁶		36	40.28	8	8.57	0.38	-
	Wheelchair Curling ⁷		33	38.97				
	Wheelchair Tennis ⁸		31	39.97				
	Swimming ⁹		32	39.53				
	Self-defeating humour		Amputee Football ¹	30	21.87			
		Athletics ²	34	27.09				
		Boccia ³	31	27.16				
		Table Tennis ⁴	34	29.06				
		Archery ⁵	31	25.10				1-4
		Wheelchair Basketball ⁶	36	26.97	8	38.57	0.00	1-8
		Wheelchair Curling ⁷	33	28.30				4-9
		Wheelchair Tennis ⁸	31	29.42				7-9
		Swimming ⁹	32	21.06				

Aggressive humour	Amputee Football ¹	30	23.00	8	17.80	0.02	7-9
	Athletics ²	34	23.24				
	Boccia ³	31	21.77				
	Table Tennis ⁴	34	24.41				
	Archery ⁵	31	25.23				
	Wheelchair Basketball ⁶	36	23.50				
	Wheelchair Curling ⁷	33	26.00				
	Wheelchair Tennis ⁸	31	23.65				
	Swimming ⁹	32	21.28				
Total	Amputee Football ¹	30	120.13	8	14.90	0.06	
	Athletics ²	34	130.65				
	Boccia ³	31	125.00				
	Table Tennis ⁴	34	128.06				
	Archery ⁵	31	133.77				
	Wheelchair Basketball ⁶	36	128.03				
	Wheelchair Curling ⁷	33	133.06				
	Wheelchair Tennis ⁸	31	130.32				
	Swimming ⁹	32	120.06				

When Table 10 is examined, considering the participants' scores in the scale according to the sports branch variable, while significant differences were found in the sub-dimensions of self-enhancing humour style, self-defeating humour style, and aggressive humour style, no significant difference was found in the affiliative humour style sub-dimension and in the total scores. In the self-enhancing humour style sub-dimension, significant differences were found between boccia and archery, wheelchair tennis and archery, and wheelchair tennis and wheelchair curling. In the self-defeating humour style sub-dimension, a significant difference was found between amputee football and wheelchair tennis, wheelchair tennis and swimming, and wheelchair curling and swimming. In the sub-dimension of aggressive humour style, a significant difference was found between wheelchair curling and swimming.

Table 11. Comparison of the participants' scores in the scales according to the sports background variable

	Sub-dimensions	Sport Age	N	\bar{x}	sd	χ^2	p	Difference
Basic Personality Traits Scale	Extraversion	Below 3 years ¹	88	32.32	2	20.11	0.01	1-3 3-2
		4-6 years ²	133	28.69				
		7 years and above ³	71	32.31				
	Conscientiousness	Below 3 years ¹	88	35.05	2	37.10	0.00	1-2 1-3 3-2
		4-6 years ²	133	31.83				
		7 years and above ³	71	32.93				
	Agreeableness	Below 3 years ¹	88	36.40	2	45.31	0.00	1-2 1-3 3-2
		4-6 years ²	133	33.08				
		7 years and above ³	71	33.80				

Humour Styles Scale	Neuroticism	Below 3 years ¹	88	19.45	2	16.96	0.02	2-1 2-3
		4-6 years ²	133	21.19				
		7 years and above ³	71	19.34				
	Openness to experience	Below 3 years ¹	88	21.61	2	24.23	0.01	1-2 1-3
		4-6 years ²	133	19.73				
		7 years and above ³	71	20.13				
	Negative valence	Below 3 years ¹	88	8.44	2	5.13	0.17	-
		4-6 years ²	133	9.50				
		7 years and above ³	71	8.35				
	Total	Below 3 years ¹	88	153.27	2	50.36	0.00	1-2 1-3 3-2
		4-6 years ²	133	144.02				
		7 years and above ³	71	146.86				
	Self-enhancing humour	Below 3 years ¹	88	41.00	2	20.61	0.01	1-2 1-3
		4-6 years ²	133	36.08				
		7 years and above ³	71	36.31				
	Affiliative humour	Below 3 years ¹	88	41.78	2	32.24	0.00	1-2 3-2
		4-6 years ²	133	37.91				
		7 years and above ³	71	42.80				
	Self-defeating humour	Below 3 years ¹	88	23.82	2	13.54	0.03	2-1 3-1
		4-6 years ²	133	26.67				
		7 years and above ³	71	28.63				
Aggressive humour	Below 3 years ¹	88	22.17	2	8.07	0.04	2-1	
	4-6 years ²	133	24.31					
	7 years and above ³	71	23.96					
Total	Below 3 years ¹	88	128.77	2	7.48	0.04	3-2	
	4-6 years ²	133	124.97					
	7 years and above ³	71	131.70					

When Table 11 is examined, considering the participants' scores in the scales according to the sports background variable, a significant difference was found in the sub-dimensions and total scores of the Basic Personality Traits Scale. In the extraversion sub-dimension, it was found that the scores of individuals with less than 3 years of sports background were higher than those of individuals with 7 years of sports background and above, and that the scores of individuals with 7 years of sports background and above were significantly higher than those of individuals with 4-6 years of sports background (χ^2 (sd=2, n=292) = 20.11, $p < 0.05$). In the conscientiousness sub-dimension, it was determined that participants with less than 3 years of sports background had higher scores (χ^2 (sd=2, n=292) = 37.10, $p < 0.05$) than the individuals with 4-6 years and 7 years and above of sports background, and individuals with 7 years and above of sports background had higher scores than the individuals with 4-6 years of sports background. In the agreeableness sub-dimension, it was found that individuals with less than 3 years of sports background had higher scores (χ^2 (sd=2, n=292) = 45.31, $p < 0.05$) than individuals with 4-6 years and 7 years and above of sports background, and the individuals with 7 years and above of sports background had higher scores (χ^2 (sd=2, n=292) = 45.31,

p<0.05) than individuals with 4-6 years of sports background. In the neuroticism sub-dimension, the scores of the individuals with 4-6 years of sports background were significantly higher (χ^2 (sd=2, n=292) = 16.96, p<0.05) than those of individuals with less than 3 years and 7 years and above of sports background. While no significant difference was found in the negative valence sub-dimension, it was found that the individuals with less than 3 years of sports background had a higher total score (χ^2 (sd=2, n=292) = 50.36, p<0.05) than individuals with 7 years and above of sports background, and individuals with 7 years and above of sports background had a higher total score (χ^2 (sd=2, n=292) = 50.36, p<0.05) than the individuals with 4-6 years of sports background. When the scores of the Humour Styles Scale were evaluated, statistically significant differences were found in all sub-dimensions and in the total scores. In the self-enhancing humour style sub-dimension, the mean scores of the athletes with less than 3 years of sports background were significantly higher than the participants with 4-6 years and 7 years and above of sports background (χ^2 (sd=2, n=292) = 20.61, p<0.05). In the affiliative humour style sub-dimension, the mean scores of the athletes with 4-6 years of sports background were significantly lower than the other two groups (χ^2 (sd=2, n=292) = 32.24, p<0.05). In the self-defeating humour style sub-dimension, the athletes with 4-6 years and 7 years and above of sports background had significantly higher scores than the athletes with less than 3 years of sports background (χ^2 (sd=2, n=292) = 13.54, p<0.05). In the aggressive humour style sub-dimension, the mean scores of athletes with 4-6 years of sports background were higher than those of athletes with less than 3 years of sports background (χ^2 (sd=2, n=292) = 8.07, p<0.05). In the total scores of the scale, individuals with 4-6 years of sports background had significantly lower mean scores (χ^2 (sd=2, n=292) = 7.48, p<0.05) than athletes with 7 years and above of sports background.

Table 12. Comparison of the participants' scores in the scales according to the variable of being a national athlete or not

	Sub-dimensions	National Athlete or Not	N	Percentages			U	P
				Q1	Q2	Q3		
Basic Personality Traits Scale	Extraversion	Yes	153	24.00	32.00	37.00	10541.0	0.898
		No	139	25.00	32.00	37.00	0	
	Conscientiousness	Yes	153	31.00	33.00	35.00	9639.00	0.165
		No	139	30.00	33.00	39.00		
	Agreeableness	Yes	153	32.00	34.00	36.00	9241.50	0.052
		No	139	32.00	35.00	39.00		
	Neuroticism	Yes	153	17.00	20.00	24.00	10013.0	0.388
		No	139	19.00	21.00	24.00	0	
	Openness to experience	Yes	153	18.00	20.00	22.00	9584.50	0.142
		No	139	18.00	20.00	24.00		
	Negative valence	Yes	153	7.00	7.00	10.00	9512.50	0.115
		No	139	6.00	9.00	11.00		
	Total	Yes	153	137.00	147.00	154.00	9296.00	0.063
		No	139	141.00	144.00	159.00		
Humour Styles Scale	Self-enhancing humour	Yes	153	29.00	39.00	42.00	8684.50	0.007
		No	139	32.00	40.00	46.00		
	Affiliative humour	Yes	153	35.00	39.00	46.00	10173.0	0.522
		No	139	38.00	41.00	43.00	0	
	Self-defeating	Yes	153	19.00	26.00	32.00	10340.0	0.683
		No	139					

humour	No	139	20.50	26.00	30.00	0	0.419
Aggressive humour	Yes	153	19.00	20.00	29.00	10054.5	
	No	139	18.50	23.00	29.00	0	0.443
Total	Yes	153	110.00	123.00	144.00	10083.0	
	No	139	118.00	122.00	141.50	0	

When Table 12 is examined, considering the participants' scores in the scales according to the variable of being a national athlete or not, no significant difference was found in the sub-dimensions and total scores of the Basic Personality Traits Scale ($p > .05$). A significant difference was found in favour of those who were not national athletes ($U = 8684.50$, $p < .05$) in the self-enhancing humour style sub-dimension of the Humour Styles Scale. No significant difference was found in its other sub-dimensions ($p > .05$).

Table 13. Evaluation of the relevance between personality traits and humour styles

	1	2	3	4	5	6	7	8	9	10	11	12	
Extraversion (1)	r	—											
	p	—											
Conscientiousness (2)	r	0.51	—										
	p	<.001	—										
Agreeableness (3)	r	0.51	0.75	—									
	p	<.001	<.001	—									
Neuroticism (4)	r	-0.66	-0.51	-0.45	—								
	p	<.001	<.001	<.001	—								
Openness to experience (5)	r	0.63	0.71	0.76	-0.49	—							
	p	<.001	<.001	<.001	<.001	—							
Negative valence (6)	r	-0.45	-0.45	-0.49	0.37	-0.37	—						
	p	<.001	<.001	<.001	<.001	<.001	—						
Basic Personality Traits Scale Total Score (7)	r	0.78	0.74	0.81	-0.43	0.85	-0.35	—					
	p	<.001	<.001	<.001	<.001	<.001	<.001	—					
Self-enhancing humour (8)	r	0.39	0.39	0.62	-0.41	0.66	-0.09	0.56	—				
	p	<.001	<.001	<.001	<.001	<.001	0.107	<.001	—				
Affiliative humour (9)	r	0.48	0.32	0.46	-0.36	0.46	-0.37	0.47	0.51	—			
	p	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	—			
Self-defeating humour (10)	r	-0.18	-0.22	-0.14	0.15	-0.07	0.20	-0.10	0.14	0.14	—		
	p	0.002	<.001	0.015	0.013	0.219	<.001	0.093	0.015	0.014	—		
Aggressive humour (11)	r	-0.05	-0.27	-0.16	0.05	-0.04	0.32	-0.06	0.11	0.08	0.57	—	
	p	0.441	<.001	0.007	0.369	0.479	<.001	0.275	0.060	0.152	<.001	—	
Humour Styles Scale Total Score (12)	r	0.30	0.09	0.38	-0.32	0.36	0.07	0.42	0.62	0.59	0.74	0.63	—
	p	<.001	0.111	<.001	<.001	<.001	0.217	<.001	<.001	<.001	<.001	<.001	—

In Table 13, the correlation analysis of the answers given by the athletes regarding the Basic Personality Traits Scale and the Humour Style Scale is given, and a significant relevance was found between the self-enhancing humour style sub-dimension of the Humour Style Scale and all sub-dimensions of the Basic Personality Traits Scale. According to the data in the table, positive personality traits, such as extraversion, were generally positively correlated with self-enhancing humour style and affiliative humour style. In addition, negative personality traits, such as neuroticism and negative valence, were found to be positively correlated with the self-defeating humour style and aggressive humour style. There was a moderately significant positive correlation between the total scores of the Basic Personality Traits Scale and the total scores of the Humour Styles Scale.

4. Discussion and conclusion

In the findings obtained, a significant difference was found in favour of male participants in the “openness to experience” and “negative valence” sub-dimensions of the Basic Personality Traits Scale. In the other sub-dimensions of the referred scale and in the Humour Styles Scale, no significant difference was found between the groups in terms of gender. In this direction, it can be stated that male participants are more open, willing, and curious about new experiences and innovations compared to female participants, and they tend to escape from events or situations that may cause problems more than female participants. In other sub-dimensions of both scales, it can be stated that the gender variable is not a distinguishing feature for the study participants. While it was stated that differences in favour of male participants were found in some studies (Aşçı et al., 2015), differences in favour of female participants were also determined in some other studies (Cann & Matson, 2014; Dayıcan & Demiray, 2021), and in some studies, there was no difference between the genders (South et al., 2018). These findings suggest that there may be differences in humour styles and basic personality traits of athletes, which may vary depending on situational conditions.

In the findings obtained, it was determined that there were differences between age groups in terms of personality traits considering the age variable. Significant differences were found in the sub-dimensions of extraversion, conscientiousness, agreeableness, neuroticism, and openness to experience. This circumstance was generally observed between the age groups of 18-20, 21-23, 27-29, and 30 and above. It reveals that athletes of younger ages have higher scores, while athletes of older ages have lower scores. This indicates that young people are more innovative and flexible, but that they may develop a less adaptive and more stable personality as they get older. Differences were also found between the age groups in terms of the humour styles of the participants. Especially in terms of the affiliative humour style, the 18-20 age group scored lower than the 21-23 age group. This fact possibly indicates that younger individuals are more prone to a less interactive or more individualistic sense of humour. On the other hand, the higher scores of the 27-29 age group in terms of self-defeating humour style possibly indicate that this age group has more negative experiences and inner challenges and that they express this circumstance through humour. The fact that the 18-20 age group scored the highest in terms of self-enhancing humour style indicates that young people adopt a more positive and open-to-improvement humour style. This circumstance can be interpreted as that young people tend to overcome these situations through humour, instead of magnifying the difficulties they face in their lives. When the literature is examined, it is possible to come across many studies that support the findings of our study. In the study conducted by Tiryaki and Eğlenoğlu (1991) to determine the personality traits of basketball players, it was concluded that there was no relevance between the personality traits of the players and the age variable. In the study conducted by Bebek et al. (2018) on goalball athletes, it was determined that there were no significant differences between the humour styles of the athletes as per their age. Özgen (2014) examined the humour styles of teachers and found that there was a significant difference between their affiliative humour and self-defeating humour styles as per their age; on the contrary, there was no significant difference between their self-enhancing humour and aggressive humour styles as per age. In the study conducted by Işık and Cengiz (2018) on physical education and sports college students at universities, they concluded that the scores of the participants in the age group of 22 and below in terms of their self-defeating humour style were significantly higher than the participants in the age group of 23 and above. When other studies in the literature were examined, it was concluded that the researchers (Akaydın, 2015; Cihan & Dursun, 2021; Uyanık et al., 2015; Çakmak & Baş, 2016; Yirci et al., 2016; Çetinkaya & Şener, 2016) could

not determine significant differences among participants in terms of humour styles as per the variable of age.

In the findings obtained, considering the type of physical disability variable, the scores of the athletes with polio were significantly higher than those of athletes with muscular dystrophy in the sub-dimension of conscientiousness. In addition, in the same sub-dimension, the scores of the athletes with muscular dystrophy were significantly lower than those of athletes with spinal cord injury, while the scores of athletes with spina bifida were significantly lower than those of athletes with spinal cord injury. In the agreeableness sub-dimension, the scores of the amputee athletes were significantly lower than those of athletes with spinal cord injury, the scores of athletes with muscular dystrophy were significantly lower than those of athletes with spinal cord injury, and the scores of athletes with spina bifida were significantly lower than those of athletes with spinal cord injury. In the neuroticism sub-dimension, the scores of the amputee athletes were found to be significantly higher than those of athletes with polio, while the scores of the athletes with polio were found to be lower than those with muscular dystrophy. In the openness to experience sub-dimension, athletes with polio were found to have scored higher. In the total scores of the scale, the total scores of the participants with polio were significantly higher than those of the athletes with muscular dystrophy, the total scores of the athletes with muscular dystrophy were significantly lower than those with spinal cord injury, and the total scores of the ones with spina bifida were significantly lower than those of the individuals with spinal cord injury. No statistically significant difference was found in the sub-dimensions of the Humour Styles Scale and in its total scores. According to these results, it was observed that there were significant differences in personality traits, but there was no significant difference in humour styles in terms of the type of physical disability variable. Physically disabled persons are classified as ones with disabilities arising from the central nervous system and musculoskeletal system according to the location of the disability (Yılmaz, 2021). When the participants of the study were examined, it was observed that the participants with polio, spina bifida, and spinal cord injury had disabilities relevant to the central nervous system, while the amputee participants and participants with muscular dystrophy had disabilities relevant to the musculoskeletal system. In terms of personality traits, it was observed that physically disabled persons exhibit significant differences in terms of both classifications. Although studies revealed that sports have positive effects on the personality development of disabled persons (Yılmaz et al., 2014; Demir & İlhan, 2020), it is observed that there are differences in the studies conducted as per the classification of disabilities (Kara & Tazegül, 2016).

When the participants' scores in the scales were evaluated according to the degree of disability variable, a significant difference was found in the agreeableness and negative valence sub-dimensions of the Basic Personality Traits Scale. In the agreeableness sub-dimension, the significance is in favour of individuals with an 81% and higher degree of disability. In the negative valence sub-dimension, it was found that the scores of individuals with 40-59% and 60-80% disabilities were significantly higher than those of individuals with 81% and above disabilities. No difference was found in other sub-dimensions of the scale and in its total scores. The agreeableness sub-dimension is basically referred to as the harmony of the relationships established with other people according to individual differences in transient events and interpersonal and environmental circumstances (Halverson Jr. et al., 2014). In this case, it can be stated that individuals with a degree of disability of 81% and above were more adaptable than individuals with other degrees of physical disabilities. In terms of negative valence, it can be stated that individuals with 40-59% and 60-79% disabilities were prone to abstain from events or situations that could cause problems compared to participants with other disability degrees. When the scores of the Humour Styles Scale were evaluated, it was determined that the self-enhancing humour style sub-dimension scores of individuals with 40-

59% disability were significantly higher than those of individuals with 60-79% disability. The self-enhancing humour style is a style of humour that facilitates maintaining a funny perspective and coping with the difficulties of life even at stressful and troubled times (Yerlikaya, 2009; Güven, 2013). In this case, it can be stated that individuals with 40-59% disability develop a humorous perspective in coping with the difficulties they experience. In terms of the other degrees of disability, we can state that the self-enhancing humour style was not effective.

In the findings obtained, when the participants' scores in the scales were evaluated according to the sports branch variable, significant differences were found in the Basic Personality Traits Scale's sub-dimensions of extraversion, conscientiousness, agreeableness, neuroticism, and openness to experience, and in its total score, and significant differences were found in the Humour Styles Scale's sub-dimensions of self-enhancing humour style, self-defeating humour style, and aggressive humour style, while no significant difference was found in its affiliative humour style sub-dimension and in its total scores. The differences among sports branches in terms of the extraversion sub-dimension were considered to be due to the higher social interaction requirements of specific sports. The players in team sports (amputee football, basketball, and curling) are expected to be more extroverted and social. On the other hand, since individual sports (athletics, boccia, tennis, archery, and swimming) generally require less social interaction, it is thought that athletes in these sports branches tend to be more introverted. Differences in the level of responsibility may be due to the fact that individual and team sports have different perceptions of responsibility. In team sports, players may have a higher sense of responsibility as it affects group success. In individual sports, on the other hand, since the athlete is only responsible for his/her own performance, it is thought that individuals in these branches have different perceptions of responsibility. Since adaptability in team sports is a characteristic that requires cooperation and harmony among team members, team athletes can be expected to have higher levels of adaptability. In individual sports, on the other hand, since there is a need to work more independently and make decisions on their own, it can be stated that the level of adaptability may be lower. Neuroticism refers to the way of coping with stressful situations and maintaining emotional balance. In repressive sports such as team sports, neuroticism may be more evident because in team sports, individuals may experience emotional ups and downs under both personal and group pressure. In individual sports, on the other hand, athletes are thought to be able to maintain emotional balance more easily because they have higher control on their own. The openness to experience levels of athletes may differ according to the construct of the sport branches. While individual sports generally offer an environment that is more open to personal development and learning new techniques, in team sports, the development of individuals can be shaped more collectively depending on team strategies and game plans, which suggests that the level of openness to experience varies as per the sports branches. When the literature is examined, Başer (2002) stated that self-confidence, determination, and success motivation of athletes with hearing impairment are lower than non-disabled athletes, and that the athletes with hearing impairment, although they have similar physical capacity to non-disabled athletes, cannot exhibit full performance at the time of competition due to deficiencies in personality traits. Kuru (2003) examined the personality traits of physical education students and found no significant difference between individual sports and team sports as per the sports branch variable. Coşkuntürk (1988) stated in his study that personality traits are effective on the performance of athletes. In the study conducted by Tiryaki and Eğlenoğlu (1991) to determine the personality traits of basketball players, the personality traits of the players were compared, and it was stated that there was no statistically significant difference among them. Tatar et al. (2003) examined the personality trait profiles of physical education and sports college students as per their sports branches and stated that the personality trait profiles of

football players were different from those involved in individual sports and other team sports. They also concluded that individual sports students were more rule-bound and responsible than basketball, volleyball, and handball players.

In other findings, when the participants' scores in the scales were evaluated according to the variable of being a national athlete or not, no significant difference was found in the Basic Personality Traits Scale's sub-dimensions and in its total score. In this case, we can state that being a national athlete or not has no effect on the personality traits of the participants. Personality is the whole of the characteristics that distinguish the individual from others, which are innate, acquired later, and exhibited consistently (Taymur & Türkçapar, 2012). Sports play an important role in an individual's personality development and socialization process (Karakas & Yılmaz, 2023). We can state that being a national athlete alone has no effect on personality, and the result obtained supports the literature. In the self-enhancing humour style sub-dimension of the Humour Styles Scale, a significant difference was found in favour of non-national athletes. In this case, it can be stated that non-national athletes develop a humour style that facilitates maintaining a funny perspective and coping with the difficulties of life even in stressful and troubled times. In the study conducted by Uyanık et al. (2022), it was revealed that the averages of non-national athletes were higher in terms of self-enhancing humour style. On the contrary, in Dereceli's (2020) study, no significant result was found in the variable of being a national athlete. Kuru (2003) examined the personality traits of physical education students and found no significant difference between national athlete students and non-national athlete students.

In the findings obtained, when the participants' scores in the scales were evaluated according to the sports background variable, in terms of the extraversion sub-dimension, the scores of participants with less than 3 years of sports background were higher than those of individuals with 7 years and above of sports background, and the scores of participants with 4-6 years of sports background were significantly higher than those of individuals with 7 years and above of sports background. In terms of the conscientiousness sub-dimension, it was determined that participants with less than 3 years of sports background had higher scores than ones with 4-6 years and 7 years and above of sports background, and the participants with 4-6 years of sports background had higher scores than individuals with 7 years and above of sports background. In terms of the neuroticism sub-dimension, the scores of the participants with 4-6 years of sports background were significantly higher than those with 7 years and above of sports. While no significant difference was found in terms of the negative valence sub-dimension, it was found that participants with less than 3 years of sports background had higher total scores than individuals with 4-6 years and 7 years and above of sports background, and that participants with 4-6 years of sports background had higher total scores than those with 7 years and above of sports background. Considering the participants of the study, it can be stated that those who were doing sports for less than 3 years and for 4-6 years had more extraverted and responsible personality traits, while those who have been doing sports for 4-6 years have more neuroticism traits. In the total scores, it was observed that the participants with less than 3 years of sports background scored higher. In the study conducted by Dalkıran (2014), it was stated that the sports background indicated a difference in personality traits in favour of participants with less sports background. This supports the findings of this study. However, there are also studies indicating that sports background does not affect personality traits or that the averages of participants with more sports background are higher (Aksu, 2018; Dayıcan & Demiray, 2021). When the scores of the Humour Styles Scale were evaluated, it was determined that the scores of those who have been doing sports for less than 3 years were significantly higher in all sub-dimensions. In terms of the affiliative humour style sub-dimension and the total scores of the scale, it can be stated that the athletes with 3-6 years of sports background scored higher than those with 7 years and above of sports

background. In this case, it can be stated that in terms of humour styles, the scores are in favour of the participants with less sports background. Previous studies support that there is a difference in terms of humour styles among participants with lower sports background (Bebek et al., 2018; Cihan & Dursun, 2021).

In another finding, in the correlation analysis of the answers given by the athletes regarding the Basic Personality Traits Scale and the Humour Style Scale, a significant relevance was found between the self-enhancing humour sub-dimension of the Humour Style Scale and all sub-dimensions of the Basic Personality Traits Scale. Positive personality traits such as extraversion are generally positively correlated with self-enhancing humour style and affiliative humour style. In the studies, it is stated that individuals with a positive humour style show positive personality traits, and this positively affects their performance (Merdan & Aşçı, 2021; Cann & Etzel, 2008; Dyck & Holtzman, 2013; Noorafshan & Fazli, 2016). It was determined that negative personality traits such as neuroticism and negative valence were positively correlated with self-defeating humour style and aggressive humour style. In addition, a moderately significant positive correlation was found between the total scores of the Basic Personality Traits Scale and the total scores of the Humour Styles Scale. In previous studies, it is stated that individuals with negative personality traits tend to use self-defeating humour style and aggressive humour style (Jovanovic, 2011; Akdur & Durak Batıgün, 2017; Martin et al., 2003).

Consequently, it was concluded that the personality traits of male participants were more open to new experiences and innovations and prone to abstaining from events or situations that may cause problems and had no effect on their humour styles. It was also concluded that there were significant differences in personality traits and humour styles as per age groups. This finding shows that social interaction and extroverted behaviours are more prominent at younger ages, but personality traits become more balanced with increasing age. It was deduced that the participants who were higher education graduates adopted a self-defeating sense of humour, and there was no effect on personality traits. It was inferred that there were significant differences among personality traits in terms of the type of physical disability variable. In terms of the degree of disability, it was concluded that individuals with a degree of disability of 81% and above were more adaptable than individuals with other degrees of disability, and individuals with a degree of disability of 40-59% and 60-79% were more prone to abstain from events or situations that may cause problems than individuals with other degrees of disability. In terms of humour styles, individuals with a degree of disability of 40-59% developed a funny perspective in coping with the difficulties they experience. Additionally, it was revealed that there were significant differences among the personality traits and humour styles of athletes in terms of the sports branch variable. These findings suggest that personality traits and humour styles of athletes are shaped according to the branches they are involved in, and the sports branch is effective in the personality development of individuals. It was concluded that there was no effect on personality traits in terms of the variable of being a national athlete or not and that non-national athletes adopted a self-developing humour style. Significant differences were obtained in both personality traits and humour styles in terms of the sports background variable. In the relevance between personality traits and humour styles, it was found that participants with positive humour styles exhibited positive personality traits, and participants with negative personality traits were prone to self-defeating humour style and aggressive humour style. Based on the results obtained in the study, it is possible to state that there is an important relevance between personality and humour and that individuals' humour styles are affected by personality traits.

As a result of these results, it is recommended to work with sports psychologists who will be providing psychological support and with sports social workers who will be providing psychosocial support for our research participants. It is also recommended that the managers

of the sports clubs they are affiliated with take measures to ensure that their athletes benefit from such support services for their development.

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