



Examining the Narcissistic Personality Traits and Self-Efficacy Levels of Football Coaches According to Their Artificial Intelligence Usage Situations

Onur Akyüz¹, Gülseren Özaltaş Serçek²

¹ Dicle University, Physical Education and Sports School, Kitilbil Neighborhood, TUR-21280 Diyarbakır, Turkey, onurakyuz1986@gmail.com

² Mardin Artuklu University, Faculty of Tourism, Nur Neighborhood, TUR-47100 Artuklu/Mardin, Turkey, gulserenozaltassercek@artuklu.edu.tr

Annotation. The aim of this research is to examine the narcissistic personality traits and self-efficacy levels of coaches approved by the Turkish Football Federation during the 2024–2025 season. Tests indicate that young coaches exhibit more narcissistic tendencies, while middle aged coaches exhibit higher coaching self-efficacy. Coaches with little to moderate coaching experience exhibit more narcissistic traits, while coaches with moderate coaching experience exhibit higher coaching self-efficacy.

Keywords: *artificial intelligence, education, narcissism, coach self-efficacy level.*

Introduction

The recent application of artificial intelligence (AI) technologies to sports training is valued as a new and important area of research for studies investigating the interaction between performance enhancement and individual psychological factors. A review of the literature reveals that psychological structures form the basis of students' understanding and acceptance of artificial intelligence. Furthermore, it indicates that these

psychological structures reshape university students' attitudes towards technological advancements (Karim et al., 2024). In light of this finding, examining the impact of coaches' artificial intelligence usage levels on narcissistic personality traits and self-efficacy levels is valuable both in terms of practical applications and theoretically.

When the effects of narcissism on individuals are examined, it has not only negative but also positive effects, particularly on performance and leadership structures. Considering these behaviors, the sublimative aspect of narcissism leads to positive effects such as resilience, inspiration, and high self-confidence. At the same time, narcissism can also lead to negative behaviors such as high levels of egocentrism, lack of empathy, and exploitative behavior (Morf & Rhodewalt, 2001). Research in the field of sports psychology has determined that coaches with narcissistic personality traits significantly contribute to athlete motivation and help improve performance (Stenling & Tafvelin, 2014).

Bandura (1977) defined self-efficacy as an individual's perception of their ability to complete a task. Within this framework, self-efficacy is an important psychological phenomenon that can directly affect personal performance and motivation dynamics. Research indicates that the use of artificial intelligence is more likely to be used by individuals with low levels of self-efficacy (Karim et al., 2024). Furthermore, studies aimed at determining the psychological structures of coaches reveal a relationship between self-efficacy, leadership orientation, coaching experience duration, and coach education levels (Feltz et al., 1999; Myers et al., 2008).

This research is important for determining the relationships between educational technologies and sports psychology. Within this framework, it investigates the relationship between football coaches' use of artificial intelligence (AI) and their narcissistic personality traits and self-efficacy levels. A review of the literature reveals that while research on AI focuses on its use in coaching and training, no studies have been found that examine the relationship between football coaches' AI use, narcissistic personality traits, and self-efficacy levels. Therefore, this research addresses a significant problem in the literature while offering new insights into how psychological and technological factors influence coaches' behavior.

The study's findings may reveal the effects of artificial intelligence (AI) on psychological factors in the training programs implemented by football coaches. In particular, understanding the impact of AI use on the leadership styles, self-efficacy levels, and decision-making processes of football coaches with high narcissistic personality traits could positively contribute to both their performance management and their role modeling processes. Furthermore, these findings are expected to provide a foundation for sports federations and educational institutions to integrate technological and psychological assessments into a comprehensive model for improving the qualifications of coaches.

The results of this study could pave the way for future research, such as:

- Comparing the interaction between AI use and personality traits in different sports.
- Longitudinally examining the effects of AI-supported training systems on self-efficacy development.
- Investigating the psychological consequences of AI-based feedback mechanisms in coach-athlete interactions.

The purpose of this 7 study 1 is to examine the narcissistic personality traits of football coaches based on their level of artificial intelligence use.

To this end, the following sub-research questions will be answered:

1. Is there a significant difference in narcissistic personality traits and their sub-dimensions based on football coaches' level of artificial intelligence use?
2. Is there a significant difference in self-efficacy levels and their sub-dimensions based on football coaches' level of artificial intelligence use?
3. Do narcissistic personality traits and their sub-dimensions differ significantly according to football coaches' age?
4. Do self-efficacy levels differ significantly according to football coaches' age?
5. Is there a significant difference between narcissistic personality traits and their sub dimensions based on the variable of years of coaching?
6. Is there a significant difference between self-efficacy levels based on the variable of years of coaching?
7. Do narcissistic personality traits differ according to level of education?
8. Do self-efficacy levels differ by education level?
9. Do narcissistic personality traits differ by coaching category?
10. Do self-efficacy levels differ by coaching category?
11. Is there a significant relationship between football coaches' AI usage levels and their narcissistic personality traits and self-efficacy levels?

Methods

Research Model

This study employed a survey model, a quantitative research design. This study determined the narcissistic personality traits and self-efficacy levels of football coaches based on their use of artificial intelligence and explored whether narcissistic personality traits and self-efficacy levels differed based on certain variables.

Research Group

The research population consists of football coaches whose licenses were approved for the 2024-2025 Turkish Football Season. The sample group consists of 341 football

coaches within the research population and accessible to the researcher. Based on this, the G-Power analysis suggested a total of 305 participants, 26 with a 95% confidence interval and a $\pm 5\%$ margin of error. To account for the possibility of participants withdrawing from the study or providing incorrect answers, approximately 10% more coaches were included in the sample. Convenience sampling was used in the study, which limits generalizability and should be clearly stated.

Table 1

Demographic Information of the Research Respondents

Characteristics	N	%
Use of Artificial Intelligence		
Yes	181	53,1
No	160	46,9
Age		
24-40 Years Old	81	23,8
41-49 Years Old	95	27,9
50-57 Years Old	81	23,8
Ages 58 and Above	84	24,6
Year of Coaching		
3-8 Years	117	34,3
9-15 Years	110	32,3
16 Years and Above	114	33,4
Education Level		
High School	132	38,7
Undergraduate	148	43,4
Graduate	61	17,9
Coaching Category		
Professional League	123	36,1
Amateur League	151	44,3
Dosen't Work	67	19,6

Data Collection Tools

Personal Information Form: 3. This form includes items regarding the participating football coaches' use of artificial intelligence, age, length of time coaching, income level, educational background, and the category in which they coach.

To determine the level of narcissism distributed in the study, the 16-item Narcissistic Personality Inventory (NPI-16), recorded by Ames (2006) and whose Turkish versions underwent validity and reliability studies by Atay (2009), was used. The scale,

which includes the dimensions of authority, exhibitionism, exploitation, entitlement, self-efficacy, and superiority, has a two-option (forced choice) measurement format. While the Cronbach's Alpha internal fitting time in the original adaptation study of the inventory, where the total score ranges from 0 to 16, was .65; in the current study, this value was calculated as .57. This value is below the acceptable reliability limit and was considered a methodological limitation of the study. This is thought to be due to the homogeneity of the sample, the short number of items (16 items) in the Turkish version of the scale, and the influence of participants' tendency to respond online. This limitation was taken into consideration in the interpretation of the findings.

To determine the self-efficacy levels of coaches in this study, the Coach Self-Efficacy Scale-II (CSES-II), detailed by Feltz et al. (1999) and revised by Myers et al. (2008), was used. The scale, adapted to Turkish contexts by Unutmaz and Gençer (2017) and presented with valid and reliable evidence, has a five-point scale of 18 items: motivation (4 items), game strategies (4 items), technical instruction (4 items), character formation (3 items), and physical condition (3 items). Rated on a 4-point Likert scale, there are no reverse-coded items; the total score ranges from 18 to 72. The Cronbach Alpha internals are reported as .89 in the adaptation version, while it was calculated as .85 in the current research options.

Data Collection and Analysis

The Narcissistic Personality Inventory and Coach Efficacy Scale were selected for this study because the personality traits and professional competencies of football coaches can influence their attitudes toward utilizing innovative technologies (e.g., artificial intelligence-based analysis programs, data-supported decision systems, etc.). Narcissistic personality traits are thought to be related to individuals' self-confidence, control, and authority tendencies, while self-efficacy is associated with their ability to adapt to and effectively use technological tools. Therefore, these two scales were selected to measure variables psychologically and professionally related to the use of artificial intelligence. Scales were prepared electronically and distributed to football coaches via virtual network channels (email, social media). The SPSS 24.00 package program was used to analyze the research data. Parametric tests should be performed to test the normality of the data distribution if the skewness and kurtosis values of the obtained data are within ± 1.5 (Tabachnick et al., 2013). The t-test was used for comparisons of two independent groups, the Pearson Correlation Test for correlation analysis, and the ANOVA and Scheffé Post Hoc tests were used for comparisons of three or more independent groups.

Data for the study was collected online (via email and social media). While this method is advantageous in terms of time and cost, it has the potential to introduce sample bias because only coaches who actively use online platforms were recruited. Furthermore, the study used a convenience sampling method, which limits the gen-

eralizability of the findings to all football coaches. The results should be interpreted with these limitations in mind.

Table 2
Skewness and Kurtosis Values

	Skewness	Kurtosis
Superiority	.463	-.938
Exhibitionism	1.154	.184
Authority	.790	-.352
Exploitation	.319	-.895
Claiming Rights	1.111	1.469
Self-Sufficiency	.001	.269
NPI General	1.033	.824
Motivation	-.783	-.657
Game Strategies	.061	-1.289
Technical Education	-.460	-.847
Character Development	-1.563	2.146
Physical Condition	-.602	-.847
Self-Efficacy General	-.303	-.850

Findings

This study aims to examine the narcissistic personality traits and self-efficacy levels of football coaches based on their use of artificial intelligence, in terms of several variables. In this study, designed with this purpose in mind, the results of the data analysis obtained using the Narcissistic Personality Inventory and the Coach Self-Efficacy Scale are presented in this section.

Table 3
T-Test Results Showing Significant Differences in the Narcissistic Personality Inventory and Its Subscales Based on the Variable of Artificial Intelligence Use Among Football Coaches

Scale and Sub-Dimensions	Use of AI	n	$\bar{x}$	Sd	t	df	P
Superiority	Yes	181	.24	.23	-.39	339	.70
	No	160	.25	.25			
Exhibitionism	Yes	181	.14	.21	-.70	339	.48
	No	160	.16	.21			
Authority	Yes	181	.23	.30	-.66	339	.51
	No	160	.26	.30			

Scale and Sub-Dimensions	Use of AI	n	$\bar{x}$	Sd	t	df	P
Claiming Rights	Yes	181	.06	.17	-.61	339	.54
	No	160	.08	.18			
Exploitation	Yes	181	.29	.27	-1.52	339	.13
	No	160	.34	.27			
Self-Sufficiency	Yes	181	.33	.18	-.69	339	.49
	No	160	.34	.19			
NPI General	Yes	181	.22	.13	-1.35	339	.18
	No	160	.24	.14			

* $p < .05$ significance level

Comparative analyses of football coaches' use of artificial intelligence revealed that the overall average and sub-dimension scores for narcissistic personality traits were significantly differentiable between the groups ($p > 0,05$).

Table 4

T-Test Results Showing the Significant Difference in the Coach Competence Scale and Its Sub-Dimensions According to the Variable of Artificial Intelligence Use of Football Coaches

Scale and Sub-Dimensions	Use of AI	n	$\bar{x}$	Sd	t	df	P
Motivation	Yes	181	3.66	.39	.35	339	.73
	No	160	3.65	.38			
Game Strategies	Yes	181	3.32	.49	.86	339	.39
	No	160	3.28	.49			
Technical Education	Yes	181	3.68	.31	.56	339	.58
	No	160	3.66	.30			
Character Development	Yes	181	3.73	.43	.48	339	.63
	No	160	3.75	.33			
Physical Condition	Yes	181	3.49	.51	.20	339	.85
	No	160	3.48	.49			
Self-Efficacy General	Yes	181	3.57	.33	.46	339	.65
	No	160	3.56	.31			

* $p < .05$ significance level

According to the independent samples t-test findings, it was determined that the self-efficacy levels and sub-dimension scores of football coaches did not show a statistically significant variation according to the artificial intelligence usage variable ($p > 0,05$).

Table 5

One-Way ANOVA Results Showing Significant Differences in Narcissistic Personality Inventory and Its Sub-Dimensions According to the Age Variable of Football Coaches

Scale and Sub-Dimensions	Age	n	$\bar{x}$	sd	f	p	Scheffé
Superiority	24–40 Years Old ⁽¹⁾	81	.21	.20	2.16	.09	-
	41–49 Years Old ⁽²⁾	95	.29	.26			
	50–57 Years Old ⁽³⁾	81	.23	.23			
	Ages 58 and Over ⁽⁴⁾	84	.21	.24			
Exhibitionism	24–40 Years Old ⁽¹⁾	81	.21	.24	5.29	.00*	1-3 1-4
	41–49 Years Old ⁽²⁾	95	.16	.21			
	50–57 Years Old ⁽³⁾	81	.12	.20			
	Ages 58 and Over ⁽⁴⁾	84	.10	.20			
Authority	24–40 Years Old ⁽¹⁾	81	.40	.28	39.95	.00*	1-2
	41–49 Years Old ⁽²⁾	95	.22	.25			1-3
	50–57 Years Old ⁽³⁾	81	.00	.00			2-3 2-4
	Ages 58 and Over ⁽⁴⁾	84	.36	.35			3-2 3-4
Claiming Rights	24–40 Years Old ⁽¹⁾	81	.18	.24	16.38	.00*	1-2 1-3 1-4
	41–49 Years Old ⁽²⁾	95	.03	.12			
	50–57 Years Old ⁽³⁾	81	.04	.13			
	Ages 58 and Over ⁽⁴⁾	84	.04	.13			
Exploitation	24–40 Years Old ⁽¹⁾	81	.33	.28	7.75	.00*	1-3 2-3 3-4
	41–49 Years Old ⁽²⁾	95	.38	.26			
	50–57 Years Old ⁽³⁾	81	.19	.25			
	Ages 58 and Over ⁽⁴⁾	84	.33	.25			
Self-Sufficiency	24–40 Years Old ⁽¹⁾	81	.29	.17	3.56	.01*	1-4
	41–49 Years Old ⁽²⁾	95	.34	.20			
	50–57 Years Old ⁽³⁾	81	.33	.18			
	Ages 58 and Over ⁽⁴⁾	84	.38	.17			
NPI General	24–40 Years Old ⁽¹⁾	81	.27	.17	9.21	.00*	1-3 2-3 3-4
	41–49 Years Old ⁽²⁾	95	.25	.13			
	50–57 Years Old ⁽³⁾	81	.17	.10			
	Ages 58 and Over ⁽⁴⁾	84	.24	.12			

* p < .05 significance level

The results of the analysis of variance (ANOVA) presented in Table 5 reveal that the narcissistic personality traits of football coaches show statistically significant differences in all dimensions except the superiority sub-dimension, depending on the age variable ($P < 0.05$). According to the post-hoc Scheffé test findings, applied to determine the source of significant differences, a significant divergence was found between Group 1 and Groups 3 and 4 in the exhibitionism dimension. In the authority sub-dimension, multi-layered intergroup interaction was observed (Groups 1-2/3; 2-3/4; 3-2/4), while Group 1 differed statistically significantly from all other groups (2, 3, and 4) in its tendency to feel entitled. The difference between Group 3 and Groups 1, 2, and 4 in terms of the exploitation sub-dimension and the overall scale scores is noteworthy. In terms of self-efficacy, a significant difference was found only between Group 1 and Group 4. In contrast, the perception of superiority was found to be homogeneously distributed among age groups and was not affected by the age variable ($p > 0.05$).

Table 6
One-Way ANOVA Results Showing Significant Differences in the Coach Competence Scale and Its Sub-Dimensions According to the Age Variable of Football Coaches

Scale and Sub-Dimensions	Age	n	$\bar{x}$	sd	f	p	Scheffé
Motivation	24–40 Years Old ⁽¹⁾	81	3.56	.40	8.84	.00*	1-2
	41–49 Years Old ⁽²⁾	95	3.76	.30			1-3
	50–57 Years Old ⁽³⁾	81	3.75	.30			2-4
	Ages 58 and Over ⁽⁴⁾	84	3.54	.46			3-4
Game Strategies	24–40 Years Old ⁽¹⁾	81	2.97	.35	40.45	.00*	1-2
	41–49 Years Old ⁽²⁾	95	3.66	.39			1-3
	50–57 Years Old ⁽³⁾	81	3.22	.50			1-4
	Ages 58 and Over ⁽⁴⁾	84	3.29	.43			2-3 2-4
Technical Education	24–40 Years Old ⁽¹⁾	81	3.50	.34	29.13	.00*	1-2
	41–49 Years Old ⁽²⁾	95	3.77	.21			1-3
	50–57 Years Old ⁽³⁾	81	3.84	.20			2-4
	Ages 58 and Over ⁽⁴⁾	84	3.57	.32			3-4
Character Development	24-40 Years Old ⁽¹⁾	81	3.73	.29	12.04	.00*	1-2
	41-49 Years Old ⁽²⁾	95	3.87	.26			1-4
	50-57 Years Old ⁽³⁾	81	3.77	.34			2-4
	Ages 58 and Over ⁽⁴⁾	84	3.55	.53			3-4
Physical Condition	24-40 Years Old ⁽¹⁾	81	3.26	.53	13.69	.00*	1-2
	41-49 Years Old ⁽²⁾	95	3.61	.46			1-3
	50-57 Years Old ⁽³⁾	81	3.67	.40			2-4
	Ages 58 and Over ⁽⁴⁾	84	3.38	.50			3-4

Self-Efficacy General	24–40 Years Old ⁽¹⁾	81	3.39	.29	25.32	.00*	1-2
	41–49 Years Old ⁽²⁾	95	3.73	.28			1-3
	50–57 Years Old ⁽³⁾	81	3.64	.22			2-4
	Ages 58 and Over ⁽⁴⁾	84	3.46	.35			3-4

* p < .05 significance level

When Table 6 was examined, it was found that there was a significant difference in the motivation sub-dimension of coach efficacy levels of football coaches according to the age variable ($p < 0.05$). Scheffé test, one of the post-hoc tests, was applied to determine the difference between the groups, and the result of the Scheffé test was found to be a difference between Group 1 and Groups 2 and 3, and between Group 4 and Groups 2 and 3 ($P < 0.05$). In the game strategies sub-dimension of the coach efficacy scale, a significant difference was observed between Group 1 and Groups 2, 3, and 4, and between Group 2 and Groups 3 and 4 ($p < 0.05$). In the technical teaching sub-dimension of the coach efficacy scale, a significant difference was observed between Group 1 and Groups 2 and 3, and between Group 4 and Groups 2 and 3 ($p < 0.05$). In the character formation sub-dimension of the coach competence scale, a significant differentiation was found between Groups 1 and 2 and between Group 4 and Groups 1, 2 and 3 according to the age variable ($p < 0.05$). In the physical condition sub-dimension of the coach competence scale, a differentiation was observed between Group 1 and Groups 2 and 3 and between Group 4 and Groups 2 and 3 according to the age variable ($p < 0.05$). A significant differentiation was observed in the general mean scores of the coach competence scale between Group 1 and Groups 2 and 3, and between Group 4 and Groups 2 and 3 according to the age variable ($p < 0.05$).

Table 7
One-Way ANOVA Results Showing Significant Differences in Narcissistic Personality Inventory and Its Sub-Dimensions According to the Variable of Football Coaches' Years of Coaching

Scale and Sub-Dimensions	Year of Coaching	n	$\bar{x}$	sd	f	p	Scheffé
Superiority	3–8 Years ⁽¹⁾	117	.22	.22	1.02	.36	
	9–15 Years ⁽²⁾	110	.26	.23			
	16 Years and Above ⁽³⁾	114	.25	.26			
Exhibitionism	3–8 Years ⁽¹⁾	117	.17	.22	7.38	.00*	1-3 2-3
	9–15 Years ⁽²⁾	110	.19	.25			
	16 Years and Above ⁽³⁾	114	.09	.15			

Authority	3–8 Years ⁽¹⁾	117	.33	.29	9.19	.00*	1-2 1-3
	9–15 Years ⁽²⁾	110	.16	.29			
	16 Years and Above ⁽³⁾	114	.24	.30			
Claiming Rights	3–8 Years ⁽¹⁾	117	.15	.23	21.83	.00*	1-2 1-3
	9–15 Years ⁽²⁾	110	.03	.11			
	16 Years and Above ⁽³⁾	114	.03	.11			
Exploitation	3–8 Years ⁽¹⁾	117	.32	.29	1.35	.26	
	9–15 Years ⁽²⁾	110	.34	.24			
	16 Years and Above ⁽³⁾	114	.28	.27			
Self-Sufficiency	3–8 Years ⁽¹⁾	117	.28	.19	6.85	.00*	1-2 1-3
	9–15 Years ⁽²⁾	110	.37	.18			
	16 Years and Above ⁽³⁾	114	.35	.17			
NPI General	3–8 Years ⁽¹⁾	117	.24	.15	1.73	.18	
	9–15 Years ⁽²⁾	110	.24	.14			
	16 Years and Above ⁽³⁾	114	.21	.12			

* $p < .05$ significance level

The analysis results in Table 7 show that the professional seniority (years of coaching) of coaches leads to statistically significant differences in various dimensions of narcissistic personality traits ($p < 0.05$). The findings of the Scheffé post-hoc test, applied to determine the source of significant differences, are summarized below: In the exhibitionism sub-dimension, Group 3 (assumed to be the most senior group) was found to be significantly different from Groups 1 and 2. A similar trend was observed in the authority, entitlement, and self-efficacy dimensions of the scale; a statistically significant difference was determined between Group 1 and the other two groups (Groups 2 and 3) ($p < 0.05$). In contrast, the length of coaching experience did not have a decisive effect on the superiority and exploitative sub-dimensions and the overall inventory scores, and these dimensions showed a homogeneous distribution according to professional seniority ($p > 0.05$).

Table 8

One-Way ANOVA Results Showing Significant Differences in the Coaching Competence Scale And Its Sub-Dimensions According to the Variable of Football Coaches' Coaching Years

Scale and Sub-Dimensions	Year of Coaching	n	$\bar{x}$	sd	f	p	Scheffé
Motivation	3–8 Years ⁽¹⁾	117	3.62	.32	.92	.40	
	9–15 Years ⁽²⁾	110	3.69	.42			
	16 Years and Above ⁽³⁾	114	3.66	.40			
Game Strategies	3–8 Years ⁽¹⁾	117	3.17	.46	11.98	.00*	1-2 2-3
	9–15 Years ⁽²⁾	110	3.47	.49			
	16 Years and Above ⁽³⁾	114	3.26	.47			
Technical Education	3–8 Years ⁽¹⁾	117	3.60	.30	10.80	.00*	1-2 2-3
	9–15 Years ⁽²⁾	110	3.78	.28			
	16 Years and Above ⁽³⁾	114	3.64	.31			
Character Development	3–8 Years ⁽¹⁾	117	3.76	.30	6.96	.00*	1-3 2-3
	9–15 Years ⁽²⁾	110	3.82	.30			
	16 Years and Above ⁽³⁾	114	3.63	.50			
Physical Condition	3–8 Years ⁽¹⁾	117	3.37	.54	5.62	.00*	1-2
	9–15 Years ⁽²⁾	110	3.58	.42			
	16 Years and Above ⁽³⁾	114	3.51	.51			
Self-Efficacy General	3–8 Years ⁽¹⁾	117	3.50	.30	8.70	.00*	1-2 2-3
	9–15 Years ⁽²⁾	110	3.66	.31			
	16 Years and Above ⁽³⁾	114	3.54	.33			

* $p < .05$ significance level

When Table 8 was examined, it was determined that there was a significant difference in the game strategies sub-dimension of the coaching competence levels of football coaches according to the variable of year of coaching ($p < 0.05$). Scheffé test, one of the post-hoc tests, was applied to determine the difference between the groups, and as a result of the Scheffé test, a significant differentiation was observed between Group 2 and Groups 1 and 3 ($p < 0.05$). In the technical education sub-dimension of the coaching competence scale, a significant differentiation was found between Group 2 and Groups 1 and 3 according to the variable of year of coaching ($p < 0.05$). In the character formation sub-dimension of the coaching competence scale, a significant differentiation was found between Group 2 and Groups 1 and 3 according to the variable of year of coaching ($p < 0.05$). In the physical condition sub-dimension of the

coaching competence scale, a differentiation was observed between Group 1 and Group 2 according to the variable of year of coaching ($p < 0.05$). A significant difference was observed between Group 2 and Groups 1 and 3 in the overall average scores of the Coach Competence Scale based on the variable of years of coaching ($p < 0.05$). No significant difference was observed in the motivation sub-dimension of the Coach Competence Scale based on the variable of years of coaching ($p > 0.05$).

Table 9
One-Way ANOVA Results Showing Significant Differences in Narcissistic Personality Inventory and Its Sub-Dimensions According to the Education Level Variable of Football Coaches

Scale and Sub-Dimensions	Education Level	n	$\bar{x}$	sd	f	p	Scheffé
Superiority	High School ⁽¹⁾	159	.31	.25	17.81	.00*	1-2
	Undergraduate ⁽²⁾	153	.21	.21			1-3
	Graduate ⁽³⁾	29	.06	.13			2-3
Exhibitionism	High School ⁽¹⁾	159	.13	.22	12.76	.00*	1-3 2-3
	Undergraduate ⁽²⁾	153	.13	.19			
	Graduate ⁽³⁾	29	.33	.22			
Authority	High School ⁽¹⁾	159	.24	.29	0.78	.46	
	Undergraduate ⁽²⁾	153	.24	.32			
	Graduate ⁽³⁾	29	.31	.25			
Claiming Rights	High School ⁽¹⁾	159	.04	.13	10.80	.00*	1-2 2-3
	Undergraduate ⁽²⁾	153	.11	.21			
	Graduate ⁽³⁾	29	.00	.00			
Exploitation	High School ⁽¹⁾	159	.36	.26	4.16	.02*	1-2
	Undergraduate ⁽²⁾	153	.27	.29			
	Graduate ⁽³⁾	29	.26	.14			
Self-Sufficiency	High School ⁽¹⁾	159	.34	.17	7.83	.00*	1-3 2-3
	Undergraduate ⁽²⁾	153	.35	.20			
	Graduate ⁽³⁾	29	.21	.16			
NPI General	High School ⁽¹⁾	159	.25	.14	2.14	.12	
	Undergraduate ⁽²⁾	153	.22	.14			
	Graduate ⁽³⁾	29	.20	.06			

* $p < .05$ significance level

When the analysis results in Table 9 are examined, it is seen that the professional seniority and education levels of the coaches create a statistically significant basis for

differentiation in many dimensions of narcissistic personality traits ($p < 0.05$). The Scheffé test, applied to determine the source of the significant difference found in the superiority sub-dimension depending on the coaching years variable, revealed that Group 1 was statistically different from Groups 2 and 3, and Group 2 was statistically different from Group 3. In the evaluations made in the context of the education level variable, while the difference between Group 3 and Groups 1 and 2 in the exhibitionism and self-efficacy dimensions was noteworthy, Group 2 was found to be significantly different from Groups 1 and 3 in the assertiveness dimension. Furthermore, a statistically significant difference was determined between Group 1 and Group 2 in the exploitative tendency; however, it was understood that the mean scores of the authority sub-dimension were not affected by education level and did not show a statistically significant difference between the groups ($p > 0.05$).

Table 10
One-Way ANOVA Results Showing Significant Differences in the Coach Competence Scale and Its Sub-Dimensions According to the Variable of Football Coaches' Education Level

Scale and Sub-Dimensions	Education Level	n	$\bar{x}$	sd	f	p	Scheffé
Motivation	High School ⁽¹⁾	159	3.69	.36	2.36	.10	1-2
	Undergraduate ⁽²⁾	153	3.64	.36			
	Graduate ⁽³⁾	29	3.53	.57			
Game Strategies	High School ⁽¹⁾	159	3.39	.43	5.27	.01	
	Undergraduate ⁽²⁾	153	3.21	.48			
	Graduate ⁽³⁾	29	3.29	.70			
Technical Education	High School ⁽¹⁾	159	3.69	.30	1.17	.31	
	Undergraduate ⁽²⁾	153	3.67	.29			
	Graduate ⁽³⁾	29	3.59	.42			
Character Development	High School ⁽¹⁾	159	3.77	.33	1.91	.15	
	Undergraduate ⁽²⁾	153	3.69	.45			
	Graduate ⁽³⁾	29	3.79	.27			
Physical Condition	High School ⁽¹⁾	159	3.54	.47	1.80	.17	
	Undergraduate ⁽²⁾	153	3.44	.53			
	Graduate ⁽³⁾	29	3.40	.55			
Self-Efficacy General	High School ⁽¹⁾	159	3.61	.28	3.10	.06	
	Undergraduate ⁽²⁾	153	3.53	.31			
	Graduate ⁽³⁾	29	3.52	.50			

* $p < .05$ significance level.

The analysis findings presented in Table 10 revealed that the educational level of football coaches led to a statistically significant difference in the game strategies sub-dimension ($p < 0.05$). The Scheffé post-hoc test, applied to determine the source of this difference, showed that the significant difference occurred between Group 1 and Group 2. However, when examining the motivation, technical training, character formation, and physical fitness sub-dimensions of the scale, as well as the overall mean scores, it was determined that the educational level variable did not create a statistically significant difference in these parameters, and the scores showed a homogeneous distribution among the groups ($p > 0.05$).

Table 11

One-Way ANOVA Results Showing Significant Differences in Narcissistic Personality Inventory and Its Sub-Dimensions According to the Coaching Category Variable of Football Coaches

Scale and Sub-Dimensions	Coaching Category	n	$\bar{x}$	sd	f	p	Scheffé
Superiority	Professional League ⁽¹⁾	140	.21	.25	15.047	.00*	1-3 2-3
	Amateur League ⁽²⁾	160	.22	.20			
	Doesn't work ⁽³⁾	41	.42	.24			
Exhibitionism	Professional League ⁽¹⁾	140	.15	.19	10.427	.00*	1-3 2-3
	Amateur League ⁽²⁾	160	.11	.20			
	Doesn't work ⁽³⁾	41	.28	.28			
Authority	Professional League ⁽¹⁾	140	.21	.29	1.308	.27	
	Amateur League ⁽²⁾	160	.26	.32			
	Doesn't work ⁽³⁾	41	.28	.25			
Claiming Rights	Professional League ⁽¹⁾	140	.04	.14	3.792	.02*	1-2
	Amateur League ⁽²⁾	160	.09	.20			
	Doesn't work ⁽³⁾	41	.07	.18			
Exploitation	Professional League ⁽¹⁾	140	.24	.23	8.748	.00*	1-2 1-3
	Amateur League ⁽²⁾	160	.36	.29			
	Doesn't work ⁽³⁾	41	.37	.28			
Self-Sufficiency	Professional League ⁽¹⁾	140	.32	.18	1.853	.16	
	Amateur League ⁽²⁾	160	.34	.18			
	Doesn't work ⁽³⁾	41	.38	.22			
NPI General	Professional League ⁽¹⁾	140	.20	.12	11.656	.00*	1-3 2-3
	Amateur League ⁽²⁾	160	.24	.13			
	Doesn't work ⁽³⁾	41	.32	.17			

* $p < .05$ significance level

The data presented in Table 11 reveal that the coaching category variable leads to statistically significant variation on several dimensions of narcissistic personality traits ($p < 0.05$). Scheffé post-hoc analyses showed that Group 3 differed significantly from Groups 1 and 2 in the sub-dimensions of superiority and exhibitionism, as well as in the overall inventory scores. Similarly, a significant difference was found between Group 1 and Group 2 in terms of assertiveness and exploitative tendencies ($p < 0.05$). However, the coaching category did not have a decisive effect on the mean scores of the authority and self-efficacy dimensions, and these sub-dimensions showed a homogeneous distribution among the study groups ($p > 0.05$).

Table 12

One-Way ANOVA Results Showing Significant Differences in the Coaching Competence Scale and Its Sub-Dimensions According to the Coaching Category Variable of Football Coaches

Scale and Sub-Dimensions	Coaching Category	n	$\bar{x}$	sd	f	p	Scheffé
Motivation	Professional League ⁽¹⁾	140	3.63	.39	2.57	.08	
	Amateur League ⁽²⁾	160	3.70	.33			
	Doesn't work ⁽³⁾	41	3.56	.52			
Game Strategies	Professional League ⁽¹⁾	140	3.34	.54	.72	.49	
	Amateur League ⁽²⁾	160	3.28	.44			
	Doesn't work ⁽³⁾	41	3.25	.47			
Technical Education	Professional League ⁽¹⁾	140	3.65	.33	2.98	.06	
	Amateur League ⁽²⁾	160	3.66	.30			
	Doesn't work ⁽³⁾	41	3.78	.21			
Character Development	Professional League ⁽¹⁾	140	3.73	.35	1.25	.29	
	Amateur League ⁽²⁾	160	3.76	.42			
	Doesn't work ⁽³⁾	41	3.66	.36			
Physical Condition	Professional League ⁽¹⁾	140	3.60	.42	9.10	.00*	1-2
	Amateur League ⁽²⁾	160	3.36	.54			
	Doesn't work ⁽³⁾	41	3.56	.50			
Self-Efficacy General	Professional League ⁽¹⁾	140	3.58	.33	.33	.72	
	Amateur League ⁽²⁾	160	3.55	.31			
	Doesn't work ⁽³⁾	41	3.56	.31			

* $p < .05$ significance level

The analysis results presented in Table 12 reveal that the coaching category variable creates a statistically significant difference in the physical conditioning sub-dimension

($p < 0.05$). The Scheffé post-hoc test, applied to determine the source of this difference, shows that the significant difference occurs between Group 1 and Group 2. However, when the motivation, game strategies, technical training, and character development sub-dimensions of the scale and the overall competency scores were examined, no statistically significant effect of the coaching category was found on these parameters; the scores showed a similar trend between the groups ($p > 0.05$).

Table 13
Relationship test Between the Use of Artificial Intelligence and the Narcissistic Personality Inventory and the Self-Efficacy Scale for Coaches

		Use of Artificial Intelligence	NPI	Self-Efficacy
Use of Artificial Intelligence	r	1	-.025	.073
	p		.287	.649
	n	341	341	341
NPI	r	-.025	1	.058
	p	.649		.287
	n	341	341	341
Self-Efficacy	r	.073	.058	1
	p	.178	.287	
	n	341	341	341

Table 13 shows the relationship between football coaches’ use of artificial intelligence and the Narcissistic Personality Inventory and the Coach Self-Efficacy Scale. The current findings indicate that there is no significant relationship between football coaches’ use of artificial intelligence and both the Narcissistic Personality Inventory and coach self-efficacy.

Discussion

This study aimed to examine the narcissistic personality traits and self-efficacy levels of football coaches in relation to their use of artificial intelligence (AI) tools. The discussion below integrates the findings with theoretical perspectives to better explain the socio-psychological mechanisms underlying the observed results.

These findings reveal no statistically significant relationship between the narcissistic personality patterns of football coaches and their levels of artificial intelligence (AI) use. This result differs from previous studies in the literature (Stein et al., 2024; Sun, 2025; Serçek & Korkmaz, 2023), which argued that individuals with high narcissistic tendencies have a more positive attitude towards AI technologies. This may be due to

the fact that football coaches view AI not as a tool to increase their individual visibility or boost their self-esteem, but rather as a functional mechanism supporting their professional processes. Therefore, it is considered that narcissistic motivations are not directly activated within the context of this technological interaction, and the use of AI remains limited to professional boundaries. From another perspective, this table suggests that football coaches are still not using artificial intelligence at a sufficient level professionally.

New research reveals a significant correlation between the self-efficacy levels of football coaches and their use of artificial intelligence. In a study by Demir and Beyazhançer (2024) examining the effects of artificial intelligence use on the self-efficacy levels of primary school mathematics teachers, they determined that the use of artificial intelligence contributed to the self-efficacy levels of teachers in terms of education and experience variables. The reason for this study, which shows parallels with our work, is thought to stem from the dynamic and unpredictable nature of the environments in which football coaches operate on the field. Since decision-making processes in coaching involve instantaneous reactions, they are quite complex. Therefore, integrating artificial intelligence tools, which are software products, into the instantaneous decision-making situations of coaches is not easy. This makes it difficult for coaches to develop self-efficacy beliefs regarding these technologies.

This research found that the level of narcissistic personality traits increases as the age of coaches decreases. Some studies in the literature support this finding (Foster et al., 2003; Gök et al., 2021). Coaches who are new to the profession feel the need to prove themselves and gain approval by showcasing their coaching skills to those around them. Therefore, narcissistic personality behaviors can have a significant impact on coaches in order to maintain their need for control and protect their self-esteem. Especially since the football environment is a competitive market, young football coaches may exhibit more narcissistic behaviors in order to gain success and visibility.

When the self-efficacy levels of football coaches are examined in terms of the age variable, the average self-efficacy scores of the youngest (24–40) and oldest (58 and above) football coaches are higher than others. A review of the literature reveals varying results when considering the self-efficacy of coaches in terms of age. Ermiş et al. (2019), in their study on tennis coaches, determined that the average self-efficacy scores of the 32 and above age group were higher than other age groups. In contrast, Koçak (2019), who examined the self-efficacy of coach candidates, and Ateş and Ateş (2023), who examined the self-efficacy of volleyball coaches, did not observe a significant difference in terms of self-efficacy and age variables. This situation may be due to the fact that the self-efficacy levels of coaches vary in different branches of sport. The reason for the higher self-efficacy levels among middle-aged coaches is that experience gained over time strengthens self-efficacy by increasing self-confidence, adaptability, and a sense of mastery. Furthermore, coaches in this age group have assumed leadership roles, gained

decision-making autonomy, and reached a level of psychological maturity. Therefore, high self-efficacy levels can be considered a reflection of both professional competence and psychological resilience.

When the narcissistic personality traits of football coaches were examined in terms of the professional seniority variable, statistically significant differences were observed in the exhibitionism, authority, and entitlement sub-dimensions and self-efficacy levels, while no significant difference was observed in the superiority and exploitative sub-dimensions and the overall mean scores of the NKE. These findings contradict the research of Cankurtaran and Berisha (2012). It is considered that the main reason for this inconsistency in the literature is that the aforementioned study worked with a heterogeneous sample group from different sports disciplines, while the current research is conducted on a homogeneous group focusing only on the football branch. This situation supports the idea that narcissistic tendencies and the changes in these tendencies with professional experience may stem from branch-specific dynamics and structural differences of sports disciplines.

In an examination of coach self-efficacy levels and years of coaching, it was determined that football coaches, classified as having 9–15 years of coaching experience, had the highest averages in the sub-dimensions of game strategies, technical instruction, character formation, physical conditioning, and total coaching efficacy. A review of the literature supporting the current research findings reveals that the length of professional experience has a positive effect on coaching competencies. In a study conducted by Ermiş et al. (2019), it was found that coaches with eight years or more of experience exhibited statistically higher average success rates in the dimensions of game strategies, technical training, and character building. In parallel with our study, Kaçak (2019), in his research with prospective coaches, determined that there is a significant relationship between the variable of sporting experience and the sub-dimensions of self-efficacy, namely technical training, game strategy, and character formation. Repeating the experience of success increases individuals' self-efficacy. For coaches just starting their careers, uncertainty about the future and lack of feedback can lower their self-efficacy levels. Similarly, experiencing professional dissatisfaction and burnout in subsequent years can cause a decrease in the self-efficacy levels of coaches. Therefore, it can be said that the period in which coaches have the highest levels of motivation and self-efficacy is the most successful period for the groups with the most experience.

Comparisons between the education level variable and narcissism revealed that coaches with a high school education had higher mean scores on the superiority and exploitativeness subscales. Those with a postgraduate education, on the other hand, had higher mean scores on exhibitionism. No significant difference was found in the total score. A review of the literature reveals varying findings regarding the relationship between narcissistic personality traits and educational level in coaches. In contrast to the findings of this research, a study by Gök et al. (2021) with physical education teach-

ers found that those with master's degrees had higher levels of narcissistic personality traits compared to those with bachelor's degrees. Furthermore, a study with coaches, consistent with our findings, observed that coaches with a high school diploma had higher average scores on the superiority dimension compared to coaches with other educational levels (Cankurtaran & Berisha, 2021). It is thought that the reason for this result is that coaches with a high school diploma experience feelings of inadequacy due to their lower educational level compared to other coaches, and therefore feel the need to compensate for this deficiency by asserting superiority. Regarding the education level variable, the higher scores on the superiority and exploitativeness subscales among high school graduate coaches can be explained by the self-aggrandizement model. Individuals who feel they are lacking in education may tend to compensate for this deficiency with assertiveness and dominant behaviors. Conversely, the higher scores on the exhibitionism subscale among coaches with a postgraduate degree may be related to academic self-confidence and self-expression.

When examining the level of education and coach self-efficacy, high school football coaches had higher mean scores than undergraduate coaches in the game strategies sub-dimension. No significant difference was found in other sub-dimensions. The literature shows varying findings regarding the effects of educational variables on the self-efficacy levels of coaches. Ateş and Ateş (2023) observed that volleyball coaches with postgraduate degrees had higher average scores in the physical conditioning sub-dimension compared to those with undergraduate degrees. In contrast, Dumangöz and Sanlav (2021) stated that volleyball coaches showed a significant difference in their athletes' self-efficacy levels according to the education level variable. For these reasons, the difference in self-efficacy levels according to the education level variable of coaches is potentially a variable.

When narcissistic personality traits were examined according to the category of coaches, it was found that football coaches who were not actively working had higher average scores than coaches working in professional and amateur leagues in the sub-dimensions of superiority, entitlement, exhibitionism, and exploitation, as well as on the overall narcissistic personality inventory. In a study conducted on active football players, it was determined that amateur athletes had higher average scores in the exhibitionism sub-dimension than professional players (Akyüz, 2023). Considering these findings, it can be said that the levels of narcissistic personality traits of football coaches who were not actively working are higher than those of football coaches working in professional and amateur teams. The transition from an active working environment to an unemployed environment may be perceived as a threat to individuals' professional careers. Therefore, narcissistic behaviors may be exhibited in order to regain lost status and protect self-esteem. Thus, narcissism is seen as a defense mechanism in this environment.

In comparisons made between the coaching category and coach self-efficacy, it was observed that football coaches working in the professional league had higher means in the physical condition sub-dimension than football coaches working in the amateur league. No significant differences were found in the other sub-dimensions. Similar studies in the literature confirm that coaching category and professional level play a decisive role in the perception of professional competence. Ateş and Ateş (2023) found that coaches working in top-level leagues had higher levels of self-efficacy than those working in youth or lower leagues. Additionally, Sağlam and Çeviker (2022) observed that coaches working at the national team level exhibited more positive behavioral patterns than those who had not. Furthermore, when examining self-efficacy from the perspective of athletes, Akyüz (2023) determined that professional footballers had higher levels of self-efficacy than amateur footballers. Accordingly, it can be said that coaches working in higher positions possess higher professional skills. It is thought that working with professional athletes leads coaches to expend more effort and engage in greater physical participation compared to working with amateur footballers.

Conclusion

The findings indicate that football coaches with less experience and younger age groups exhibit higher levels of narcissistic personality. Conversely, football coaches with moderate experience and those in the middle age group were found to have higher levels of self-efficacy. It was determined that narcissistic personality tendencies increased as the educational level of football coaches decreased. Football coaches who were not actively working were found to have higher levels of narcissistic personality compared to other groups.

This research highlights the importance of the psychological state and technological attitudes of football coaches. It was observed that there was no direct correlation between football coaches' use of artificial intelligence and their narcissistic personality traits and self-efficacy levels. However, future research could also examine mediating variables such as professional identity and digital competence. Expanding this research to different sports branches or a larger sample group would provide more comprehensive information on the relationship between technology use in sports settings and psychological variables and performance.

Acknowledgement

The authors sincerely thank all participants for their invaluable time and effort towards the study.

Orcid

Onur Akyüz <https://orcid.org/0000-0002-7631-460X>

Gülseren Özaltaş Serçek <https://orcid.org/0000-0001-6552-4559>

References

- Akyüz, O. (2023). *An examination of team commitment and narcissism levels in football players* [Doctoral thesis. Ankara University]. Ankara University Health Sciences Institute.
- Ames, D.R., Rose, P., & Anderson, C. P. (2006). The NPI-16 as a short measure of narcissism. *Journal of Research in Personality*, 40, 440–450.
- Atay, S. (2009). Standardization of narcissistic personality inventory into Turkish. *Gazi University Faculty of Economics and Administrative Sciences Journal*, 11(1), 181–196.
- Ateş, H., & Ateş, N. (2023). Examining the relationship between psychological well-being and self-efficacy Levels of Volleyball Coaches. *Mediterranean Journal of Sports Sciences*, 6(1), 1045–1059. <https://doi.org/10.38021/asbid.1374634>
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84(2), 191–215. <https://doi.org/10.1037/0033-295X.84.2.191>
- Cankurtaran, Z., & Berisha, M. (2021). An examination of the relationship between coaches' narcissistic personality traits and their education levels. *Gazi Journal of Physical Education and Sports Sciences*, 26(1), 71–84.
- Demir, B., & Beyazhançer, R. (2024). Investigation of artificial intelligence self-efficacy of primary school mathematics teacher candidates in terms of some variables. *International Journal of Social and Humanities Sciences Research (JSHSR)*, 11(113), 2393–2398. <https://doi.org/10.5281/zenodo.14279357>
- Dumangöz, P. D., & Sanlay, R. (2021). Examining the professional self-efficacy levels of volleyball coaches according to some demographic characteristics. *Mediterranean Journal of Sports Sciences*, 4(2), 251–264.
- Ermiş, E., Satıcı, A., Bostancı, Ö., İmamoğlu, O., & Taşmektepligil, M. Y. (2019). Investigating the proficiency level of tennis coaches. *OPUS International Journal of Society Research*, 14(20), 1211–1227. <https://doi.org/10.26466/opus.605062>
- Feltz, D. L., Chase, M. A., Moritz, S. E., & Sullivan, P. J. (1999). A conceptual model of coaching efficacy: Preliminary investigation and instrument development. *Journal of Educational Psychology*, 91(4), 765–776. <https://doi.org/10.1037/0022-0663.91.4.765>
- Foster, J. D., Campbell, W. K., & Twenge, J. M. (2003). Individual differences in narcissism: Inflated self-views across the lifespan and around the world. *Journal of Research in Personality*, 37(6), 469–486. [https://doi.org/10.1016/S0092-6566\(03\)00026-6](https://doi.org/10.1016/S0092-6566(03)00026-6)
- Gök, O., Hazar, K., & Koç, A. F. (2021). Examination of narcissistic behaviors of physical education teachers and their relationship with job satisfaction. *Journal of Education and Learning*, 10(4), 192. <https://doi.org/10.5539/jel.v10n4p192>

- Karim, S., Noh, N. M., Noor, N. M., & Alzouebi, K. (2024). Artificial intelligence usage and its relationship with self-efficacy and self-esteem among university students. *Education and Information Technologies*, 29, 345–362.
- Koçak, Ç. V. (2019). Examining the coach self-efficacy levels of coach candidates. Ankara university school of physical education and sports *SPORTMETRE Journal of Physical Education and Sports Sciences*, 17(1), 55–62. <https://doi.org/10.33689/spormetre.520507>
- Morf, C. C., & Rhodewalt, F. (2001). Unraveling the paradoxes of narcissism: A dynamic self-regulatory processing model. *Psychological Inquiry*, 12(4), 177–196. https://doi.org/10.1207/S15327965PLI1204_1
- Myers, N. D., Feltz, D. L., Chase, M. A., Reckase, M. D., & Hancock, G. R. (2008). The Coaching Efficacy Scale II-High School Teams. *Educational and Psychological Measurement*, 68(6), 1059–1076.
- Myers, N. D., Wolfe, E. W., Maier, K. S., Feltz, D. L., & Reckase, M. D. (2008). An evaluation of the psychometric properties of the coaching efficacy scale for coaches. *Measurement in Physical Education and Exercise Science*, 12(4), 161–179. <https://doi.org/10.1080/10913670802349777>
- Sağlam, C., & Çeviker, A. (2022). Examining the relationship between coaches' self-efficacy and attitude levels towards coaching. *Gümüşhane University Journal of Health Sciences*, 11(2), 662–676. <https://doi.org/10.37989/gumussagbil.1097639>
- Sedikides, C., Campbell, W. K., Reeder, G. D., & Elliot, A. J. (2004). Narcissism and self-esteem reactivity: The role of positive and negative performance feedback. *Journal of Personality*, 72(2), 313–340. <https://doi.org/10.1111/j.0022-3506.2004.00299.x>
- Serçek, S. & Korkmaz, M. (2023). Sporda Giyilebilir Teknoloji Üzerine Sistematik Bir Literatür Taraması [A systematic literature review on wearable technology in sports]. *International Journal of Contemporary Educational Studies (IntJCES)*, 9(1).
- Serçek, S. & Korkmaz, M. (2023). Turizm Sektöründe Metaverse'ün Kullanımına İlişkin Sistematik Bir Literatür Çalışması [A systematic literature study on the use of metaverse in the tourism sector]. *Journal of Social, Human and Administrative Sciences*, 6(5), 701–721.
- Stein, J.-P., Messingschlager, T., Gnams, T., Hutmacher, F., & Appel, M. (2024). Attitudes towards AI: measurement and associations with personality. *Scientific Reports*, 14(1), 2909. <https://doi.org/10.1038/s41598-024-53335-2>
- Stenling, A., & Tafvelin, S. (2014). Transformational leadership and well-being in sports: The mediating role of need satisfaction. *Journal of Applied Sport Psychology*, 26(2), 182–196. <https://doi.org/10.1080/10413200.2013.819392>
- Sun, R., Tang, M., Zhou, J., Loan, N. T. T., & Wang, C. Y. (2025). The dark tetrad as associated factors in generative AI academic misconduct: Insights beyond personal attribute variables. *Frontiers in Education*, 10. <https://doi.org/10.3389/feduc.2025.1551721>
- Tabachnick, B. G., Fidell, L. S., & Ullman, J. B. (2013). *Using multivariate statistics* (6 ed.). Pearson.
- Unutmaz, V., & Gençer, T. (2017). Turkish adaptation study of the Coach Competence Scale II. *Journal of Sports Sciences Research*, 2(2), 69–78.

Futbolo trenerių narcisistinės asmenybės bruožų ir saviveiksmingumo lygių tyrimas atsižvelgiant į jų dirbtinio intelekto naudojimo situacijas

Onur Akyüz¹, Gülseren Özaltas Serçek²

¹ Dicle universitetas, Kūno kultūros ir sporto mokykla, Kitilbil apylinkė, TUR-21280 Diyarbakiras, Turkija, onurakyuz1986@gmail.com

² Mardin Artuklu universitetas, Turizmo fakultetas, Nur apylinkė, TUR-47100 Artuklu/Mardinas, Turkija, gulserenozaltassercek@artuklu.edu.tr

Santrauka

Šio tyrimo tikslas – ištirti 2024–2025 m. sezonui Turkijos futbolo federacijos patvirtintų trenerių asmenybės: ar jie turi narcisistinės asmenybės bruožų, koks jų saviveiksmingumo lygis, atsižvelgiant į dirbtinį intelektą ir atitinkamus demografinius kintamuosius. Buvo ištirtas 341 futbolo treneris. Taikant aprašomąją statistiką analizuoti jų demografiniai duomenys, narcisistinės asmenybės požymiai bei jų saviveiksmingumas. Duomenims rinkti naudota tyrėjo parengta asmens duomenų forma, narcisistinės asmenybės inventorius (angl. *Narcissistic Personality Inventory*, NPI-16) ir trenerio saviveiksmingumo 2 skalė (angl. *Coach Self-Efficacy Scale-2*, CES-2). CES-2 taikyta siekiant įvertinti trenerių suvokiamą profesinės kompetencijos lygį, o NPI-16 – dalyvių narcisistinės asmenybės savybėms matuoti. Duomenų analizei atlikti naudotasi SPSS programinės įrangos paketu; futbolo trenerių demografiniai duomenys aprašyti pateikiant vidurkius, procentines dalis ir dažnius. Skirtumams tarp grupių nustatyti naudoti *post-hoc* testai, o ryšiams tarp kintamųjų – Pirsono koreliacijos metodas. Tyrimo rezultatai parodė, kad jauniems treneriams būdingesni narcisistinės asmenybės bruožai, o vidutinio amžiaus treneriai pasižymėjo aukštesniu saviveiksmingumu. Treneriams, turintiems mažą arba vidutinę treniravimo patirtį, narcisistinės asmenybės bruožai yra būdingesni, tačiau vidutinę treniravimo patirtį turintys treneriai pasižymėjo aukštesniu treniravimo saviveiksmingumu.

Esminiai žodžiai: *dirbtinis intelektas, švietimas, narcisizmas, treniravimo saviveiksmingumo lygis.*

Gauta 2025 08 24 / Received 24 08 2025
Priimta 2025 11 11 / Accepted 11 11 2025