



## The Dark Tetrad Personality Traits and Communication Skills: A Study on Physical Education Teachers

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### Abstract

**Aim:** This study aims to examine the relationship between physical education teachers' dark tetrad personality traits (machiavellianism, narcissism, psychopathy and sadism) and their coaching communication skills.

**Method:** The study was conducted with 245 physical education teachers, consisting of 126 female and 119 men, with an average age of 23.4 years. Additionally, dark tetrad personality traits and communication skills were compared based on variables such as marital status, gender, years of experience, years of sports participation and type of sport branch. The research data were found to follow a normal distribution and a one-way analysis of variance (ANOVA) was applied for variable comparisons.

**Results:** The findings indicate that physical education teachers generally exhibit moderate levels of dark tetrad personality traits while possessing high levels of communication skills. No significant differences were observed between dark tetrad traits and communication skills based on demographic variables such as gender, marital status and type of sports branch. However, in the psychopathy sub-dimension, married teachers scored higher than unmarried teachers and male teachers had higher psychopathy levels and communication skills, indicating that as psychopathy levels decrease, communication skills improve. At the same time, a significant difference was found between the variables of years of professional experience and years of sports and the psychopathy sub-dimension in favor of those with lower levels of sports and professional experience.

**Conclusion:** These findings provide an important foundation for understanding how dark tetrad personality traits influence effective communication with athletes.

**Key words:** Communication Skills, Dark Tetrad, Personality, Physical Education Teachers.

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## INTRODUCTION

Nowadays, the relationship between individuals' personality traits and communication skills is becoming increasingly important, especially in the fields of education and sports. These traits are particularly prominent in terms of professional and personal values for teachers, who are constantly engaged in social interactions. Physical education teachers are not only individuals who provide physical education in school settings but also professionals who coach team sports, individual sports, or other physical activities. These dual roles require teachers to develop both instructional and leadership skills. The personality traits of individuals who simultaneously undertake teaching and coaching responsibilities play a significant role in their relationships with students and athletes. Personality traits directly influence teachers' behaviors, leadership styles, and communication methods, which, in turn, shape the efficiency of the educational environment and student development (Griffiths, 2022). Research in personality psychology has shown that certain personality traits significantly impact social interactions, leadership, and group management. In this context, the "dark tetrad" personality traits machiavellianism, narcissism, psychopathy, and sadism refer to manipulative, self-centered, and emotionally indifferent tendencies in interpersonal relationships (Türkdoğan & Balkıs, 2024; Yavuz & Şahin, 2023). Given that physical education teachers also serve as coaches, these personality traits may play a crucial role in their interactions with students and athletes. Therefore, in order to better understand the relationship between dark personality traits and communication skills through this research, it is first necessary to define the concepts of dark tetrad, machiavellianism, narcissism, psychopathy, and sadism.

The dark tetrad personality model describes individuals who exhibit manipulative, self-serving, and emotionally detached attitudes in social interactions. This model comprises four primary traits: machiavellianism, narcissism, psychopathy, and sadism (Bonfá-Araujo et al., 2022; Neumann et al., 2022; Paulhus et al., 2021). The fact that physical education teachers also work as coaches may cause them to be influenced by these personality traits. Greitemeyer (2022) also suggested that each of the

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dark tetrad traits can directly affect teachers' communication styles, leadership strategies, and relationships with their athletes.

Machiavellianism is a multidimensional personality trait that encompasses interpersonal tactics, a cynical view of human nature, distrust of others, and a disregard for traditional values (Martin et al., 2012). Individuals exhibiting machiavellian traits tend to form hypocritical and superficial relationships, yet they are often perceived as charismatic and persuasive (Sabouri et al., 2016). Therefore, machiavellianism can be defined as the tendency to manipulate others, seek personal gain, and push ethical boundaries to achieve one's goals. A machiavellian teacher or coach is likely to establish strong authority within a team and use athletes to serve their own interests. These individuals may apply pressure solely for success and strategically manipulate those they interact with to reach their objectives (Jalilishishavan, 2024; Grover & Furnham, 2022).

In narcissism, rather than a conscious strategy of exploiting others in social environments, individuals tend to see themselves as superior and special. Meere & Egan (2017) associated narcissistic individuals with a grandiose sense of self and a strong desire for external validation. These individuals are characterized by megalomania, exaggerated self-love, dominance, a sense of superiority over others, egocentrism, and self-aggrandizement (Sabouri et al., 2016). In summary, these self-admiring individuals cannot focus on anything beyond themselves and their own interests. They always perceive themselves as the best, the most successful, and the most deserving (Zhang et al., 2024). A narcissistic physical education teacher and coach may constantly emphasize their achievements and view their athletes as mere tools for their personal glorification. Such personalities often exhibit a lack of empathy and may ignore the emotional needs of their athletes. Narcissistic teachers and coaches tend to expect constant admiration and approval, which can disrupt team dynamics and create an imbalanced leadership style. Additionally, they may position themselves as the central figure in their relationships with athletes, maintaining an authoritative presence in every situation (Peng & Huang, 2024). In addition, psychopathy is defined as a lack of empathy and emotional coldness. Psychopathic individuals show little concern for others and prioritize their own interests. A psychopathic teacher or coach may be indifferent to the emotional states of their athletes and focus solely on physical performance. They tend to evaluate athletes based only on results and disregard their psychological well-being. Additionally, they may exhibit impulsive decision-making, leading to a lack of control within the team, and adopt a rigid, emotionally distant communication style (Colangelo et al., 2023). Finally, sadism is, in its simplest definition, the tendency to derive pleasure from the pain of others. It can also be described as the tendency to enjoy one's own psychological or physical suffering, resorting to lies at the expense of others' harm, and attempting to manipulate others through fear to make them perform tasks (Paulhus et al., 2021). A sadistic teacher or coach may push athletes to their limits by causing them psychological or physical harm. These types of coaches can establish a fear-based leadership within the team. A sadistic approach generally undermines trust and motivation within the team because athletes may be forced to develop solely through pain and hardship. Sadistic attitudes lower athletes' morale, disrupt harmony within the team, and may negatively affect individual performance in the long run (Colangelo et al., 2023).

Physical education teaching and coaching require effective communication skills. A teacher or coach does not merely convey technical knowledge but also motivates, fosters trust, and provides psychological support. Effective communication is essential for guiding athletes' development, offering feedback, and managing team dynamics (Charlina et al., 2024). Teachers and coaches with dark tetrad traits often exhibit manipulative, harsh, and emotionally distant communication styles (Martens & Vealey, 2024; Pedersen et al., 2021). Machiavellian, narcissistic, and sadistic personalities may employ strategic, praise-seeking, and oppressive communication tactics, while psychopathic coaches display a lack of empathy and emotional detachment. Such communication styles hinder healthy relationships with athletes, reduce motivation, and decrease educational efficiency (Purnomo et al., 2021; Gharayegh Zandi, 2021). Therefore, through this study, it has been considered important for the literature to investigate and evaluate the communication skills and negative personality traits of teachers, who play an important role in shaping society.

The aim of this study is to examine the relationship between the dark tetrad personality traits and communication skills displayed by physical education teachers with coaching backgrounds. The following hypotheses have been evaluated in the research:

H<sub>0</sub>: There is no statistically significant difference between the communication skills and dark tetrad traits of physical education teachers with coaching backgrounds and the variables of age, gender, marital status, professional experience, years of sport, and type of sport.

H<sub>1</sub>: There is a statistically significant difference between the communication skills and dark tetrad traits of physical education teachers with coaching backgrounds and the variables of age, gender, marital status, professional experience, years of sport, and type of sport.

H<sub>2</sub>: There is a statistically significant negative relationship between the communication skills and dark tetrad traits of physical education teachers with coaching backgrounds.

## METHOD

### *Research model*

This study employed a quantitative research design utilizing a relational survey model. The relational survey model is a method used to analyze the correlation and effects between quantitative variables using correlation coefficients (Fraenkel & Wallen, 2006). Therefore, this study adopted this model to understand the relationship between physical education teachers' dark tetrad personality traits and communication skills.

### *Population and sample*

The study included a total of 245 physical education teachers, 126 (51.4%) female and 119 (48.6%) male, working in public schools in Aydın province in the spring and fall semester of 2024. After accessing the information about the universe in the province, (450) according to the G\*power calculation made with a margin of error of  $\alpha=0.05$  and a confidence interval of 95% (Sullivan, 2020), their size was determined as 245. In determining the sample range, the model that can be easily learned was preferred because it is both faster and easier to access the data and economical in terms of time and money for the researchers (Benoot et al., 2016). The inclusion criteria for the study were determined as physical education and sports teachers working in public schools and those who do not want to ensure the participation of volunteers, private institutions and other branches were excluded from the research.

**Table 1.** Demographic characteristics of physical education teachers participating in the study

Variables	Groups	<i>f</i>	%
Age	21-25	99	40.4
	26-30	73	29.8
	31-35	47	19.2
	36+	26	10.6
Marital status	Married	113	46.1
	Single	132	53.9
Gender	Female	126	51.4
	Male	119	48.6
Years of experience	1-3 age	104	42.4
	4-6 age	55	22.4
	7-9 age	51	20.8
	10 age+	35	14.3
The year of sports	1-3 age	36	14.7
	4-6 age	36	14.7
	7-9 age	64	26.1
	10 age+	109	44.5
Type of branch	Teams Sports	165	67.3
	Individual Sports	80	32.7
Total		245	100.0

It was determined that 40.4% of the physical education teachers participating in the study were between the ages 21-25 and were generally between the ages of 21 and 36 and over, and 53.9%, that is, were single in marital status. 51.4% of physical education teachers were female and 48.6% were male. While 42.4% had 1-3 years of experience in the teaching profession, it is seen that the rest of the participant

group had more than 4 years of experience. Again, 44.5% of physical education and sports teachers reported that they have been doing sports for 10 or more years. When the type of branch they have done in the past is examined; 67.3% of them did team sports and 32.7% of them did individual sports.

### Data collection tools

*Demographic Information Form:* Designed by the researchers, this form collected data on participants' age, gender, years of experience, marital status, years of sports participation, and type of sports branch.

*Dark Tetrad Personality Scale:* Originally developed by Paulhus et al., (2021) with 28 items covering machiavellianism, narcissism, psychopathy, and sadism, the scale was adapted into Turkish by Aytaç (2022). After factor analysis, the adapted scale consisted of 21 items, with Cronbach's alpha values of 0.90 for machiavellianism, 0.77 for narcissism, 0.77 for psychopathy, and 0.70 for sadism, indicating adequate reliability (Taber, 2018).

*Coach Communication Skills Scale:* Developed by Yılmaz et al. (2010), this 5-point Likert-type scale consists of 48 items and assesses coaches' communication skills based on athletes' perceptions. The original study reported a reliability coefficient of 0.95, while in this study, it was found to be 0.82, indicating high reliability (Taber, 2018).

### Data analysis

Data were collected online from 245 physical education teachers with coaching experience. The SPSS 26 statistical software was used for data analysis. Skewness and kurtosis values were examined to check normality, revealing that all variables fell within the accepted range of -1.5 to +1.5 (Tabachnick & Fidell, 2013). Reliability analysis showed that Cronbach's alpha coefficients for all scales were above 0.70, indicating sufficient reliability (see. Table 2). Given the normal distribution of the data, one-way ANOVA was conducted to compare dark tetrad traits and communication skills across age, years of experience, and years of sports participation. For marital status, gender, and type of sports branch, an independent samples t-test was applied. Post-hoc Bonferroni tests were used to determine the source of significant differences. Additionally, Pearson correlation analysis was performed to examine the relationships between the scales.

**Table 2.** Skewness, kurtosis and Cronbach's alpha values of the scales used

Skale	Skewness	Kurtosis	$\alpha$ (Cronbach)
Machiavellianism	0.036	-0.499	0.905
Narcissism	-0.342	0.100	0.771
Psychopathy	0.106	-0.918	0.770
Sadism	0.258	-0.575	0.709
Coach Communication Skill	-0.492	0.771	0.823

## RESULTS

In this part of the study, the findings of the dark quadruple and communication skill values obtained from physical education teachers with a coaching background were included.

**Table 3.** Physical education teachers' dark quadruple and communication skill levels

Skale	n	Min.	Max.	Mean	S.D.
Machiavellianism	245	1.00	5.00	2.78	0.89
Narcissism	245	1.00	5.00	3.13	0.81
Psychopathy	245	1.00	5.00	2.50	0.99
Sadism	245	1.00	5.00	2.64	0.96
Coach Communication Skill	245	2.88	5.00	4.22	0.39

The mean score of physical education teachers' coach communication skills was obtained as 4.22. In addition, machiavellianism scores were 2.78, narcissism scores were 3.13, psychopathy scores were 2.50, and sadism scores were 2.64, which are sub-dimensions of the dark quadruple scale. On the dark quadruple scale, the highest score of physical education teachers was in the narcissism sub-dimension, and the lowest score was in the psychopathy sub-dimension. When the table is examined, it is seen that physical education teachers with a coaching background have average dark quadruple personality traits and have a high level of communication skills.

**Table 4.** Comparison of physical education teachers' dark quadruple and communication skill levels according to age variable

Skale	Age	n	Mean	S.D.	F	p
Machiavellianism	21-25 <sup>1</sup>	99	2.67	0.91	0.87	0.45
	26-30 <sup>2</sup>	73	2.88	0.76		
	31-35 <sup>3</sup>	47	2.81	0.90		
	36 ve üzeri <sup>4</sup>	26	2.83	1.10		
Narcissism	21-25 <sup>1</sup>	99	3.11	0.92	0.69	0.55
	26-30 <sup>2</sup>	73	3.20	0.71		
	31-35 <sup>3</sup>	47	3.16	0.70		
	36 ve üzeri <sup>4</sup>	26	2.93	0.85		
Psychopathy	21-25 <sup>1</sup>	99	2.33	1.08	1.95	0.12
	26-30 <sup>2</sup>	73	2.65	0.92		
	31-35 <sup>3</sup>	47	2.65	0.77		
	36 ve üzeri <sup>4</sup>	26	2.46	1.10		
Sadism	21-25 <sup>1</sup>	99	2.61	1.08	1.48	0.22
	26-30 <sup>2</sup>	73	2.65	0.84		
	31-35 <sup>3</sup>	47	2.84	0.77		
	36 ve üzeri <sup>4</sup>	26	2.35	1.04		
Coach Communication Skill	21-25 <sup>1</sup>	99	4.24	0.47	0.62	0.59
	26-30 <sup>2</sup>	73	4.18	0.32		
	31-35 <sup>3</sup>	47	4.18	0.31		
	36 ve üzeri <sup>4</sup>	26	4.27	0.39		

*p*<0.05

According to the results given in Table 4, it was determined that machiavellianism [F(3.241)=0.87; *p*>0.05], narcissism [F(3.241)=0.69; *p*>0.05], psychopathy [F(3.241)=1.95; *p*>0.05] and sadism [F(3.241)=1.48; *p*>0.05] and coach communication skills [F(3.241)=0.62; *p*>0.05] levels, which are sub-dimensions of the dark quadruple scale, did not differ significantly according to their age.

**Table 5.** Comparison of the dark quadruple and communication skill levels of physical education teachers according to the marital status variable

Skale	Marital Status	n	Mean	S.D.	t	p
Machiavellianism	Married	113	2.88	0.88	1.65	0.09
	Single	132	2.69	0.89		
Narcissism	Married	113	3.13	0.77	0.01	0.98
	Single	132	3.13	0.85		
Psychopathy	Married	113	2.72	0.91	3.29	0.00
	Single	132	2.31	1.01		
Sadism	Married	113	2.73	0.92	1.35	0.17
	Single	132	2.56	0.99		
Coach Communication Skill	Married	113	4.21	0.33	-0.41	0.67
	Single	132	4.23	0.44		

*p*<0.05

According to the results given in Table 5, there was no significant difference between the scores of machiavellianism, narcissism and sadism, which are the sub-dimensions of the dark quadruple scale, and the level of coach communication skills according to the marital status of physical education teachers (*p*>0.05); It was determined that the psychopathy sub-dimension scores differed significantly (*p*<0.05). When the averages were examined, it was determined that the psychopathy scores of married physical education teachers were higher than those of single physical education teachers.

**Table 6.** Comparison of physical education teachers' dark quadruple and communication skill levels according to gender variable

Skale	Gender	n	Mean	S.D.	t	p
Machiavellianism	Female	126	2.69	0.92	-1.60	0.11
	Male	119	2.87	0.84		
Narcissism	Female	126	3.03	0.88	-1.85	0.06
	Male	119	3.23	0.73		
Psychopathy	Female	126	2.34	1.01	-2.64	0.00
	Male	119	2.67	0.93		
Sadism	Female	126	2.44	1.01	-3.26	0.00
	Male	119	2.84	0.87		

Coach Communication Skill	Female	126	4.22	0.42	0.14	0.88
	Male	119	4.21	0.37		

$p < 0.05$

According to the results given in Table 6, it was found that there was no significant difference between the machiavellianism and narcissism scores, which are the sub-dimensions of the dark quadruple scale, and the level of coach communication skills of physical education teachers according to their gender ( $p > 0.05$ ); It was determined that the sub-dimension scores of psychopathy and sadism showed significant differences ( $p < 0.05$ ). When the averages were examined, it was determined that the psychopathy and sadism scores of male physical education teachers were higher than those of female physical education teachers.

**Table 7.** Comparison of the dark quadruple and communication skill levels of physical education teachers according to the variable of years of experience

Skale	Years of experience	n	Mean	S.D.	F	p	Bonferroni
Machiavellianism	1-3 <sup>1</sup>	104	2.66	0.93	1.07	0.36	
	4-6 <sup>2</sup>	55	2.86	0.71			
	7-9 <sup>3</sup>	51	2.93	0.78			
	10 ve üzeri <sup>4</sup>	35	2.91	1.12			
Narcissism	1-3 <sup>1</sup>	104	3.09	0.93	0.22	0.88	
	4-6 <sup>2</sup>	55	3.20	0.69			
	7-9 <sup>3</sup>	51	3.12	0.67			
	10 ve üzeri <sup>4</sup>	35	3.11	0.84			
Psychopathy	1-3 <sup>1</sup>	104	2.26	0.99	3.77	0.01	3>1
	4-6 <sup>2</sup>	55	2.67	1.01			
	7-9 <sup>3</sup>	51	2.72	0.85			
	10 ve üzeri <sup>4</sup>	35	2.62	1.02			
Sadism	1-3 <sup>1</sup>	104	2.54	1.08	0.90	0.43	
	4-6 <sup>2</sup>	55	2.62	0.77			
	7-9 <sup>3</sup>	51	2.81	0.79			
	10 ve üzeri <sup>4</sup>	35	2.70	1.05			
Coach Communication Skill	1-3 <sup>1</sup>	104	4.26	0.50	2.18	0.09	
	4-6 <sup>2</sup>	55	4.14	0.33			
	7-9 <sup>3</sup>	51	4.15	0.25			
	10 ve üzeri <sup>4</sup>	35	4.30	0.26			

$p < 0.05$

According to the results given in Table 7, machiavellianism [ $F(3.241)=1.07$ ;  $p > 0.05$ ], narcissism [ $F(3.241)=0.22$ ;  $p > 0.05$ ] and sadism [ $F(3.241)=0.90$ ;  $p > 0.05$ ] and coach communication skill [ $F(3.241)=2.18$ ;  $p > 0.05$ ] levels, which are sub-dimensions of the dark quadruple scale, did not differ significantly according to the years of experience of physical education teachers; psychopathy [ $F(3.241)=3.77$ ;  $p < 0.05$ ] sub-dimension scores were found to differ significantly. Bonferroni test was applied to determine which groups had differences in the psychopathy sub-dimension score. According to the results of the Bonferroni test, it was determined that the psychopathy scores of physical education teachers with 7-9 years of experience were higher than physical education teachers with 1-3 years of experience.

**Table 8.** Comparison of the dark quadruple and communication skill levels of physical education teachers according to the variable of sports year

Skale	The year of sports	n	Mean	S.D.	F	p	Bonferroni
Machiavellianism	1-3 <sup>1</sup>	36	2.59	0.95	1.10	0.34	
	4-6 <sup>2</sup>	36	2.68	0.95			
	7-9 <sup>3</sup>	64	2.76	0.85			
	10 ve üzeri <sup>4</sup>	109	2.87	0.86			
Narcissism	1-3 <sup>1</sup>	36	2.90	1.02	1.12	0.34	
	4-6 <sup>2</sup>	36	3.11	0.92			
	7-9 <sup>3</sup>	64	3.18	0.69			
	10 ve üzeri <sup>4</sup>	109	3.18	0.77			
Psychopathy	1-3 <sup>1</sup>	36	2.19	1.08	3.11	0.02	3>1
	4-6 <sup>2</sup>	36	2.26	1.04			
	7-9 <sup>3</sup>	64	2.72	0.93			
	10 ve üzeri <sup>4</sup>	109	2.55	0.94			
Sadism	1-3 <sup>1</sup>	36	2.54	1.15	0.60	0.61	

	4-6 <sup>2</sup>	36	2.49	1.01		
	7-9 <sup>3</sup>	64	2.66	0.89		
	10 ve üzeri <sup>4</sup>	109	2.71	0.92		
Coach Communication Skill	1-3 <sup>1</sup>	36	4.19	0.55	2.20	0.08
	4-6 <sup>2</sup>	36	4.37	0.31		
	7-9 <sup>3</sup>	64	4.16	0.36		
	10 ve üzeri <sup>4</sup>	109	4.21	0.36		

*p*<0.05

According to the results given in Table 8, machiavellianism [F(3.241)=1.10; *p*>0.05], narcissism [F(3.241)=1.12; *p*>0.05] and sadism [F(3.241)=0.60; *p*>0.05] scores, which are the sub-dimensions of the dark quadruple scale of physical education teachers, and coach communication skills [F(3.241)=2.20; *p*>0.05] levels did not differ significantly according to their sports years; psychopathy [F(3.241)=3.11; *p*<0.05] sub-dimension scores were found to be significantly different. Bonferroni test was applied to determine which groups had differences in the psychopathy sub-dimension score. According to the results of the Bonferroni test, it was determined that the psychopathy scores of physical education teachers who did sports for 7-9 years were higher than physical education teachers who did sports for 1-3 years.

**Table 9.** Comparison of physical education teachers' dark quadruple and communication skill levels according to branch variable

Skale	Type of Sport	n	Mean	S.D.	t	p
Machiavellianism	Team sports	165	2.83	0.83	1.21	0.19
	Individual sports	80	2.67	0.98		
Narcissism	Team sports	165	3.15	0.78	0.73	0.46
	Individual sports	80	3.07	0.88		
Psychopathy	Team sports	165	2.58	0.96	1.89	0.06
	Individual sports	80	2.33	1.02		
Sadism	Team sports	165	2.72	0.91	1.86	0.06
	Individual sports	80	2.47	1.04		
Coach Communication Skill	Team sports	165	4.20	0.36	-0.83	0.40
	Individual sports	80	4.25	0.45		

*p*<0.05

According to the results given in Table 9, it was determined that the scores of machiavellianism, narcissism, psychopathy and sadism, which are the sub-dimensions of the dark quadruple scale, and the level of coach communication skills did not differ significantly according to the types of branches that physical education teachers had done in the past (*p*>0.05).

**Table 10.** Pearson correlation analysis between the dark quadruple scale and communication skill scales

Skale	Coach Communication Skill	Machiavellianism	Narcissism	Psychopathy
Machiavellianism	0.011	.	.	.
Narcissism	0.039	0.504**	.	.
Psychopathy	-0.134*	0.404**	0.285**	.
Sadism	-0.064	0.467**	0.407**	0.586**

\**p*<0.05; \*\**p*<0.01

According to the results given in Table 10, it was determined that there was a negative and significant relationship between the communication skill levels of physical education teachers with a coaching background and psychopathy, which is a sub-dimension of the dark quadruple scale (*r*=-0.134; *p*<0.05). Accordingly, it can be said that as the psychopathy levels of physical education teachers decrease, their communication level increases. Again, it was determined that there was a moderate positive significant relationship between all sub-dimensions of the scale. In this case, when any undesirable personality trait increases, it leads to an increase in other undesirable personality traits.

## DISCUSSION

This study focused on the dark tetrad personality traits and communication skills of physical education teachers with coaching experience, involving a total of 245 participants. The majority of the participants (40.4%) were between the ages of 21-25, while more than half (53.9%) were single, though the number of married participants was also significant. The sample consisted of 51.4% female and 48.6% male teachers. While 42.4% had 1-3 years of teaching experience, the remaining participants had more than

four years of experience. Additionally, 44.5% reported engaging in sports for over ten years, and 67.3% had a background in team sports, while 32.7% specialized in individual sports. These characteristics indicate that the sample group is composed of individuals with sufficient professional and athletic experience, making it a suitable representation for the study.

The study examined the relationship between dark tetrad traits, communication skills, and demographic variables such as age, marital status, gender, years of experience, years of sports participation, and type of sports branch. No statistically significant differences were found between age and communication skills, or between age and dark tetrad traits. This could be due to the homogeneous age distribution in the study, as well as potential limitations in the sample size and the sensitivity of the measurement tools used. Existing literature on dark tetrad traits among physical education teachers is limited, necessitating comparisons with research from other professional groups. Shen (2023) found a significant negative correlation between age and dark personality traits, indicating that older individuals exhibited lower levels of machiavellianism, narcissism, and psychopathy. Although this contrasts with our findings, it suggests a possible trend where dark personality traits diminish with age. However, our research indicates that negative personality traits may develop as age increases. Similarly, Birtürk & Biçer (2021) reported that communication skills improve with age among physical education teachers.

Furthermore, Onyedire et al., (2023) found that narcissism levels were higher in early adulthood, while Weidmann et al., (2023) reported lower levels of narcissism among older individuals. However, our findings did not indicate any statistically significant differences between years of experience and communication skills. On the contrary, a significant difference was found between years of experience and psychopathy, with teachers who had 7-9 years of experience scoring higher in psychopathy than those with 1-3 years of experience. This could suggest that prolonged exposure to competitive and leadership environments in sports may enhance authoritarian tendencies, manipulative behaviors, and emotional desensitization (Gonzalez-Hernandez et al., 2020; Leo et al., 2022; Yang et al., 2022). The fact that no statistically significant difference was found between communication skills and age or years of experience, which is another result of the study, was also reported in the research conducted by Uğur & Çolakoğlu (2019).

While a significant difference was found in the psychopathy subdimension of the dark tetrad scale concerning the marital status variable of physical education teachers with a coaching background where married individuals had higher scores no statistically significant difference was found in terms of communication skills. Similarly, statistically significant differences were found between gender and the psychopathy and sadism subdimensions of the dark tetrad scale; however, communication skills did not differ by gender. The literature contains both similar findings and studies reporting opposing results. Aluja et al., (2022) examined the relationship between marital status, gender, and dark personality traits in their study. While they found no significant differences in dark personality traits based on gender, they reported that single participants had higher levels of narcissism. Hussain et al., (2023) also found in their study that single individuals exhibited higher levels of narcissism. However, both findings contradict our research results. Other studies involving various sample groups have found that men tend to exhibit higher levels of narcissistic traits compared to women (Weidmann et al., 2023; Green et al., 2022; Chan & Chueng, 2022). Our research findings support the existing literature regarding male participants. This phenomenon may be attributed to societal roles and norms, where women are raised to be more empathetic and compliant, while men are encouraged to be more dominant and risk-taking. Additionally, personality traits and emotional regulation may also play a role. Similarly, Türkdöğän & Balkıs (2024) did not find a statistically significant difference between communication skills and the variables of gender and years of experience. Lastly, our study found no significant differences between the type of sports branch variable and both dark tetrad traits and communication skills. This could be due to the limited number of participants or the fact that they have already adapted to their profession as teachers. Considering that working individuals are in constant communication with others, their personality traits become particularly noteworthy (Szabo et al., 2021). The dark tetrad comprising machiavellianism, sadism, narcissism, and psychopathy is known as the social repulsiveness of personality (Ermiş et al., 2024) and is considered an undesirable trait among physical education teachers. Gharayegh Zandi (2021) explained in their study on the dark triad that even if an individual exhibits only moderate levels of these undesirable personality traits, they may still pose significant problems in



various contexts. It is important to acknowledge that the presence of such undesirable traits in individuals working in education can lead to various significant societal issues. Additionally, Türkdoğan & Balkıs (2024) found that social self-efficacy is a significant predictor variable in initiating and maintaining an effective communication process. Similarly, Alshaye (2024) identified that teachers' self-efficacy levels play a key role in their ability to establish effective communication. Therefore, it is unlikely for physical education teachers with high communication skills to develop undesirable personality traits. When examining the dark tetrad levels of the participant group, the mean scores were found to be as follows: Machiavellianism ( $X=2.78$ ), narcissism ( $X=3.13$ ), psychopathy ( $X=2.50$ ), and sadism ( $X=2.64$ ), all at moderate levels. Meanwhile, communication skills were determined to be at a high level ( $X=4.22$ ). Similarly, Demchenko et al. (2021) and Charlina et al. (2024) also found that physical education teachers' communication skills were at a sufficient level.

Finally, a negative and significant relationship was found between the communication skill levels of physical education teachers with a coaching background and the psychopathy subdimension of the dark tetrad scale ( $r=-0.134$ ;  $p<0.05$ ). Accordingly, it can be stated that as the psychopathy levels of physical education teachers decrease, their communication levels increase. Voulgaris et al. (2024) explained psychopathic tendencies in interpersonal communication as being associated with high impulsivity or low anxiety. Additionally, a moderate and significant positive relationship was found among all subdimensions of the scale. This indicates that an increase in any undesirable personality trait leads to an increase in other undesirable personality traits. No similar national study was found that could be directly associated with this result, making the findings valuable for the literature. Previous studies in different fields have also explored the relationships between the dark tetrad and various variables. Research has shown significant associations between the dark tetrad and attachment style, self-esteem, and childhood trauma (Set & Çelik, 2023), motivation and burnout (Talak, 2022), social media addiction (Özmen & Kocakaya, 2024), and happiness (Filiz et al., 2023). As a result of the study,  $H_0$  and  $H_1$  were partially confirmed, while  $H_2$  was fully confirmed.

## CONCLUSION

The findings suggest that while physical education teachers with coaching experience possess moderate levels of dark tetrad personality traits, they exhibit high levels of communication skills. A significant negative correlation was found between psychopathy and communication skills, indicating that as psychopathy levels decrease, communication skills improve. Moreover, a positive correlation was observed among all dark tetrad traits, suggesting that an increase in one undesirable trait may contribute to the elevation of others. These findings highlight the importance of effective communication in mitigating the potential negative effects of dark tetrad traits among physical education teachers. The results suggest that developing strong interpersonal communication skills could serve as a protective factor against undesirable personality tendencies.

Future research should aim to expand the sample size and include a more diverse group of physical education teachers to enhance the generalizability of findings. Additionally, longitudinal studies could provide further insights into how personality traits and communication skills evolve over time. The study contributes to the literature by offering new perspectives on how personality traits influence professional interactions in sports education and coaching contexts.

## Ethical Approval and Permission Information

Ethics Committee: Aydın Adnan Menderes Üniversitesi Sosyal ve Beşeri Bilimler Araştırmaları  
Etik Kurulu  
Protocol/Number 10/03

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