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The personality structure and mindfulness levels of football players: Enneagram theory

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Abstract

Enneagram personality types and levels of conscious awareness are an important area of research in understanding the psychological performance profiles of football players. This study investigated the relationship between soccer players' mindfulness levels and enneagram personality types. Study involved 207 active licensed football players from Turkish clubs, comprising 38 females (mean age 18.78±3.23) and 169 males (mean age 22.68±6.31). The data collection process utilized the Enneagram Personality Test and Mindfulness Inventory for Sport. Correlation analysis revealed strong positive relationships between the perfectionist personality type and the compromising (r=0.63) and helping (r=0.60) personality types. The non-judgmental (r=-0.46) and refocusing (r=-0.43) sub-dimensions showed the strongest negative relationships. Multiple regression analyses were conducted using mindfulness sub-dimensions as dependent variables. The first model found significant predictors for achiever (β=0.233), authentic (β=0.169), and compromiser (β=0.219) personality types. The second model identified perfectionist (β=-0.238), authentic (β=-0.167), head (β=-0.191), and compromiser (β=-0.186) types. The third model found that achievers (β=0.241) and authentic (β=0.327) types were significant predictors. Enneagram personality types explained considerable variance in the mindfulness (R^2=0.35), non-judgement (R^2=0.23), and refocusing (R^2=0.35) sub-dimensions. *Regression analyses indicated that Enneagram personality types were significant predictors of athletes' mindfulness (R^2 = 0.35), non-judgement (R^2 = 0.23), and refocusing (R^2 = 0.35) levels, with the achiever, authentic, and compromiser types being the most impactful predictors.* These findings demonstrate that Enneagram Theory effectively elucidates the relationship between soccer players' mindfulness levels and personality types, providing valuable insights for sports science literature.

Keywords: Decision making, enneagram theory, football, mindfulness, personality types

Futbolcuların kişilik yapısı ve bilinçli farkındalık düzeyleri: Enneagram teorisi

Öz

Enneagram kişilik tipleri ile bilinçli farkındalık düzeyleri arasındaki ilişki, futbolcuların psikolojik performans profillerini anlamada önemli bir araştırma alanı oluşturmaktadır. Bu araştırma, futbolcuların bilinçli farkındalık düzeyleri ile Enneagram kişilik tipleri arasındaki ilişkiyi incelemektedir. Çalışmaya Türk futbol kulüplerinden 38 kadın (yaş ortalaması 18.78±3.23) ve 169 erkek (yaş ortalaması 22.68±6.31) olmak üzere 207 aktif lisanslı futbolcu katılmıştır. Veri toplama aşamasında Enneagram Kişilik Testi ve Spor için Farkındalık Envanteri kullanılmıştır. Gerçekleştirilen korelasyon analizi mükemmeliyetçi kişilik tipi ile uzlaşmacı (r=0,63) ve yardımsever (r=0,60) kişilik tipleri arasında güçlü pozitif ilişkiler olduğunu ortaya koymuştur. Yargılayıcı olmayan (r=-0,46) ve yeniden odaklanma (r=-0,43) alt boyutları en güçlü negatif ilişkileri açığa çıkarmıştır. Bilinçli farkındalık alt boyutları bağımlı değişken olarak alınarak çoklu regresyon analizleri yapılmıştır. İlk modelde başarılı (β=0,233), otantik (β=0,169) ve uzlaşmacı (β=0,219) kişilik tiplerinde anlamlı yordayıcılar olarak bulunmuştur. İkinci modelde mükemmeliyetçi (β=-0,238), otantik (β=-0,167), baş (β=-0,191) ve uzlaşmacı (β=-0,186) kişilik tipleri anlamlı yordayıcılar olarak gözlenmiştir. Üçüncü modelde başarılı (β=0,241) ve otantik (β=0,327) tipler anlamlı yordayıcılar olarak bulunmuştur. Enneagram kişilik tipleri, farkındalık (R^2=0,35), yargılamama (R^2=0,23) ve yeniden odaklanma (R^2=0,35) alt boyutlarında kayda değer bir varyansı açıklamaktadır. Regresyon analizleri, Enneagram kişilik tiplerinin sporcuların farkındalık (R^2 = 0,35), yargılamama (R^2 = 0,23) ve yeniden odaklanma (R^2 = 0,35) düzeylerinin önemli yordayıcıları olduğunu ve başarılı, otantik ve uzlaşmacı tiplerin en etkili yordayıcılar olduğunu göstermiştir. Bu bulgular, Enneagram Teorisinin futbolcuların bilinçli farkındalık düzeyleri ile kişilik tipleri arasındaki ilişkiyi etkili bir şekilde açıkladığını ve spor bilimleri literatürü için değerli bilgiler sağladığını göstermektedir.

Anahtar Kelimeler: *Bilinçli farkındalık, Enneagram teorisi, futbol, karar verme, kişilik tipleri*

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INTRODUCTION

In contemporary society, individuals should be aware of circumstances pertaining to themselves and their environment. Enhancing self-awareness and environmental awareness may facilitate healthier social, communal, and romantic relationships. Individuals lacking self-awareness may pose social risks to themselves and their surroundings. It is unreasonable to expect a person unaware of their detrimental behaviors to initiate changes. Unresolved behavioral disorders can result in adverse outcomes such as anger and violence. Cultivating awareness is crucial for mitigating such issues. Awareness is defined as "being cognizant of elements that require attention or understanding and focusing on aspects that necessitate comprehension' (TDK, 2011). It is also defined as the conscious recording of stimuli and closest contact with reality (Brown et al., 2007). Awareness can be analyzed in three stages (Aktepe & Tolan, 2020). The first stage represents the fundamental level necessary for life sustenance and defense against external threats (Mithen, 1998). The second stage is self-perception required for self-awareness (Dymond & Barnes, 1997), while the third stage involves concepts of mindfulness. Kabat-Zinn (2005) explained mindfulness as paying attention moment-by-moment, free from prejudices. Different features have been emphasized in this concept (Aktepe & Tolan, 2020). According to Brown et al. (2007), these features emphasize clear awareness of feelings, thoughts, actions, environment, and internal and external worlds. Gethin (2011) refers to this as "pure and clear attention." Mindfulness is the preference to think openly about emerging negative emotions without changing, suppressing, or avoiding them (Tatlıoğlu, 2010). It refers to the ability to experience and accept the present moment, free from past experiences and future aspirations (Bishop et al., 2004). In summary, mindfulness is a state of present-focused thinking unaffected by past and future situations. This behavior can occur in sporting environments and social life. For example, if a soccer player encounters a negative situation during a match, dwelling on past events may lead to negative results. Instead, focusing on the present can lead to healthier decisions and positive outcomes. Mindfulness can impact current situations, with decision-making behaviors and personality traits affecting these processes.

A key aspect of mindfulness is its relationship with decision-making and cognitive processing. Internal and external factors shape decision-making behavior in sports (Çetin & Kara, 2024) and primarily influence an individual's awareness level through internal decision-making dynamics. In addition, research suggests that mindfulness is necessary for certain types of decision-making that involve reporting or reflecting on one's thoughts and choices. For

instance, research has demonstrated a close link between the neurophysiological processes involved in decision-making behavior and mindfulness, establishing the ability to report a decision as a hallmark of conscious thought (Kang et al., 2017). According to Rutkowski et al. (2023), this fits perfectly with what we already know: higher levels of consciousness are linked to more complex brain network properties and mindfulness is linked to more complex cognitive states. Mindfulness and decision-making mechanisms are related in this context.

People believe that Mindfulness influences both personality traits and decision-making processes. An increase in mindfulness may contribute to the development of certain personality traits. In actuality, the family and social environment in which an individual grows shape their innate personality structure. In other words, personality is shaped by the interaction of family and environment, as well as by some inherited characteristics of the individual (Batı, 2012). According to this framework, personality is a concept that can evolve, and advancements in mindfulness can positively impact personality development. Reversing this situation allows an individual's personality structure to effectively contribute to the development of mindfulness. Personality is the sum of all characteristics that constitute a person's feelings, thoughts, and behaviors that show continuity throughout life (Jayawickreme et al., 2021). Arkonaç (1998) defined personality as a set of behaviors that make an individual different from other individuals. Personality is defined as an individual's interests, attitudes, abilities, and behavioral patterns developed to adapt to the environment (Yüksel, 2006). These definitions share a common theme in that everyone possesses unique characteristics. Therefore, the existence of different personality traits has led to a need to describe various personality types. At this point, there is a need for the enneagram theory, in which nine different personality types exist (Daniels et al., 2018).

The enneagram theory is a dynamic personality typology expressing nine different personality types that develop within the framework of basic innate pursuits and fears (Alexander & Schnipke, 2020). The enneagram divides individuals into nine personality types, each characterized by unique motivations, fears, and behavior patterns (Bland, 2010). A key point in this theory is that the nine personality types consist of a variable structure, not a fixed one, and a functional approach to distinguishing the origin and motivation of each type of behavior and attitude (Maitri, 2018). These nine types are perfectionist (Type 1), helping (Type 2), achieving (Type 3), original (Type 4), observing (Type 5), questioning (Type 6), adventurous (Type 7), chieftain (Type 8), and compromising (Type 9) (Kara et al., 2022). Perfectionists constantly criticize themselves and others, striving for perfection. Achievers seek

affection by excelling in tasks and accomplishments. The original type finds attraction unattainable. Observers watch people and events, avoiding close contact. The questioning type is fond of their work. The adventurous type seeks to enjoy life. The chieftain type is extremely protective. The compromising type considers all options, making decision-making difficult (Daniels & Price, 2009).

Examining the relationship between Enneagram Personality Theory and mindfulness reveals the effectiveness of enneagram in understanding personality types and enhancing self-awareness (Sayre-Adams, 2003; Huffman et al., 2022). By categorizing emotional and instinctive patterns, the model provides insights into personality structures and the interaction between conscious and unconscious minds (Kam, 2024). This allows individuals to better understand their personality types and behavior patterns, living with more conscious awareness. Helping individuals understand their personality traits contributes to the development of mindfulness. For example, a perfectionist may think more about overcoming negative situations optimally. Let's consider a midfielder with Enneagram Type 1 (Perfectionist). When making a critical passing error during a match, this player typically may succumb to excessive self-criticism and pressure to be perfect. This situation can distract their attention, negatively affecting their performance for the rest of the game. As perfectionists sympathize with perfection, they may want their decisions to be perfect and correct. Such issues led to the conclusion that personality influences mindfulness. Figure 1 displays the Ennegram personality types.

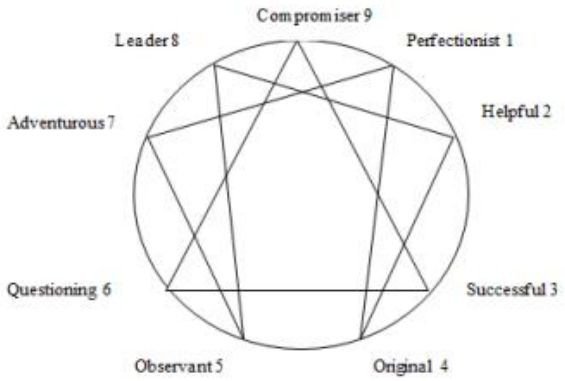

Figure 1. Ennegram personality types (Daniels & Price, 2009)

Ennegram Theory, with its nine personality types, has attracted attention in fields like personal development, psychology, and organizational behavior due to its capacity to improve self-awareness and interpersonal relationships. Recent studies (Bland, 2010; Hook et al. 2021;

Tlemsani et al., 2023) highlighted its significant attention in sports psychology. Researchers are interested in how it influences motivation, performance, and satisfaction in sports.

Football is not just a game but a means of entertainment, power, sadness, joy, national honor, and a way for athletes to find their identity (Öntürk et al., 2019). In this sport with intense meanings worldwide, athletes' personalities and self-awareness are likely to change or develop, either positively or negatively. Sports provide an environment for experiencing both positive and negative emotions simultaneously. Football represents a volatile psychological state, allowing for concurrent emotions like anger, joy, and anxiety. Soccer players' ability to cope with these emotions can be decisive in their sporting success. For example, if an athlete excelling in performance cannot manage intense emotions and displays aggressive behaviors, it could negatively impact performance, leading to failure. Thus, personality traits are believed to play a crucial role during performance. This study aimed to uncover the relationship between soccer players' personality traits and mindfulness, providing insights into athlete psychology and performance. Understanding this connection may help develop more effective training programs and mental strategies to enhance players' well-being and on-field performance.

The literature suggests the value of applying enneagram personality theory to understand mindfulness and performance in athletes, particularly soccer players. However, few empirical studies have investigated the relationship between enneagram personality types and dimensions of mindfulness among soccer players. This study aimed to address this gap by examining how Enneagram personality types correlate with and predict aspects of mindfulness in Turkish soccer players. By elucidating these associations, this study seeks to offer insights that can inform coaching strategies, player development, and performance optimization in soccer. The following methodology outlines the approach used to investigate these relationships and test the study's hypotheses concerning Enneagram personality types and mindfulness in soccer players.

This study proposes the following hypothesis:

H_1: There is a significant relationship between enneagram personality types and the subdimensions of soccer players' mindfulness levels.

H_2: Enneagram personality types of soccer players significantly predict mindfulness.

H_3: Football players' enneagram personality types significantly predict the non-judgmental sub-dimension of mindfulness.

H_4: Soccer players' Enneagram personality types significantly predict the refocusing subdimension of mindfulness.

METHOD

Research group (population-sample)

A power analysis was performed to establish a suitable sample size for this study. This analysis was designed to ensure sufficient statistical power to identify significant effects on the connection between Enneagram personality types and mindfulness levels among football players. Sample size determination was grounded in an a priori power analysis for multiple regression analysis, as this was the main statistical technique used in the study. The analysis was based on a medium effect size ($f^2 = 0.15$) as outlined by Cohen (2013), with an alpha level (α) of 0.05 and a target statistical power ($1-\beta$) of 0.80. Furthermore, the model incorporated nine predictors related to the Enneagram personality sub-dimensions.

The results of the power analysis suggested that at least 116 participants were necessary to achieve adequate statistical power. However, to bolster the robustness of the results and account for any potential missing data, a larger sample size was used. Consequently, 207 football players were included in the study, surpassing the required minimum and ensuring dependable statistical outcomes. This methodological strategy guarantees that the study's results are not compromised by low power, thus minimizing the risk of Type II errors while preserving the integrity of the statistical analyses (Fife, 2020). The study population consisted of football players actively participating in sports across various regions of Türkiye. A total of 207 football players, comprising 38 females (18.35%) and 169 males (71.65%), voluntarily participated in the study. Convenience sampling, frequently employed in scientific research, was used to select participants based on their accessibility and proximity to the researcher. Table 2 presents the demographic characteristics.

Data collection tools

In this study, observations were made using two measurement tools. The Enneagram Personality Test used in this study was developed by Subaş and Çetin (2024) and consists of 27 items, nine dimensions, and a 4-point Likert structure. Each dimension of the scale consists of 3 items and the dimensions are

Perfectionist, Helping, Achieving, Original, Observing, Questioning, Adventurous, Chieftain and Compromising. The scale has a 4-point Likert scale (1: Does not describe me at all, ..., 4: Completely describes me)

The other measurement tool used in the study, The Mindfulness Inventory for Sport, initially developed by Thienot et al. (2014), was later adapted to the Turkish cultural context by Tingaz (2020). The scale consists of a 3-dimensional, 15-item, 6-point Likert scale (6: almost always, ..., 1: almost never), with five items in each sub-dimension: Awareness, Non-judgment and Refocusing.

Confirmatory factor analysis (CFA) for data collection tools

Table 1. Confirmatory factor analysis results of the scales

	CMIN/DF (x^2/df)	CFI	TLI	SRMR	RMSEA
The Enneagram Personality Test	999/288=3.46	0.83	0.77	0.082	0.084
The Mindfulness Inventory for Sport	298/87=3.42	0.89	0.87	0.077	0.082

Confirmatory Factor Analysis (CFA) results of the measurement tools are presented in Table 1. The Enneagram Personality Test CMIN/DF (x^2/df) 999/288=3.46, CFI =0.83, TLI =0.77, SRMR =0.082, RMSEA = 0.084, and Cronbach's alpha (α) value was 0.92.

After CFA of the Mindfulness Inventory for Sport, CMIN/DF (x^2/df) 298/87=3.42, CFI 0.89, TLI 0.87, SRMR 0.077, RMSEA: 0.082, and Cronbach's alpha (α) value was 0.87.

While a TLI value of 0.77 does not meet the conventional threshold of ≥0.90, prior research (e.g., Marsh & Hocevar, 1985; Hoe, 2003) indicates that in exploratory models or those with complex structures, such values may still be considered acceptable, particularly when accompanied by satisfactory values in other fit indices such as CFI, RMSEA, and SRMR. Consequently, when assessing model adequacy, it is crucial to interpret TLI in conjunction with multiple fit indices and theoretical coherence, rather than relying solely on rigid cut-off criteria.

Data collection/processing method

This study employed the relational survey model, offering inferences beyond traditional methods by utilizing relationships between multifaceted data sources (Franco & Maitra, 2023) and providing comprehensive analysis opportunities (Gauthier et al., 2010). The correlational survey model allows researchers to discover and measure relationships between variables (Boutyline, 2017). Data collection used a multistage approach, beginning with a literature review to identify relevant variables and establish a theoretical framework. This review informed the selection of appropriate scales addressing the research questions. The chosen scales incorporated quantitative and qualitative elements for diverse data collection. To enhance validity and reliability, the scales underwent pilot testing with a representative sample. Feedback was used to refine the measurement approach and ensure clarity. The scales were administered using a convenience sampling technique to ensure adequate representation of

subgroups within the population. Multiple administration methods, including online and in-person approaches, were used to maximize response rates. Semi-structured interviews with key informants complemented the scale data and provided in-depth insights. Throughout the process, ethical guidelines were adhered to, including obtaining informed consent and ensuring confidentiality. The collected data were securely stored and organized for subsequent analyses.

Data analysis

Observations within the scope of the research were obtained from 222 football players with active licenses. Outlier and missing data analyses were applied to the observations. As the observations were collected online, no missing data were found. Within the scope of outlier analysis (box plot/scatterplot), 15 observations were excluded, and the analysis continued with 207 observations. Skewness and kurtosis values were examined to assess the normality of the distribution. As the skewness and kurtosis values were less than 2 (Leech et al., 2014), and considering the relative positions of the mean, median, and mode, it was concluded that the distribution was normal. Consequently, in addition to descriptive statistics, Pearson correlation and multiple linear regression analyses were conducted. Before conducting regression analysis, diagnostics for multicollinearity were carried out. The VIF values were found to be between 1.71 and 2.29, while tolerance values ranged from 2.21 to 3.70, suggesting that multicollinearity was not an issue. Furthermore, effect sizes and the model's explanatory power (R^2) were also documented to offer a more comprehensive view of the regression model's effectiveness.

FINDINGS

Table 2. Demographic characteristics of soccer players according to age, duration of sportsmanship and gender

Age+			Athletic Experience			Total
			1-5 Years	6-10 Years	Over 11 Years	
18 and below	Gender	Female	11 47.8%	1 4.4%	11 47.8%	23 100.0%
		Male	30 55.6%	4 7.4%	20 37.0%	54 100.0%
	Total		41 53.2%	5 6.5%	31 40.3%	77 100.0%
Between 19-25	Gender	Female	9 64.3%	2 14.3%	3 21.4%	14 100.0%
		Male	26 35.2%	12 16.2%	36 48.6%	74 100.0%
	Total		35 39.8%	14 15.9%	39 44.3%	88 100.0%
26 and above	Gender	Male	1 100%	0 0.0%	0 0.0%	1 100.0%
		Female	9 22.0%	20 48.8%	12 29.2%	41 100.0%
	Total		10	20	12	42

	Age+		Athletic Experience			Total
			1-5 Years	6-10 Years	Over 11 Years	
			23.8%	47.6%	28.6%	100.0%
Total	Gender	Female	21 55.3%	3 7.9%	14 36.8%	38 100.0%
		Male	65 38.5%	36 21.3%	68 40.2%	169 100.0%
	Total		86 41.6%	39 18.8%	82 39.6%	207 100.0%

Table 2 presents the participants' demographic information. Among the 207 athletes who participated in the study, 38 were female (18.35%), 169 were male (71.65%), 77 were 18 years old or younger (37.19%), 88 were between 19 and 25 years old (42.52%), and 42 (20.29%) were 26 years old or older. In addition, 86 (41.5%) football players had 1–5 years of experience, 39 (18.8%) had 6–10 years of experience, and 82 (39.6%) had 11 or more years of experience.

Table 3. Correlation analysis results for the sub-dimensions

N=207	X̄	SD	1	2	3	4	5	6	7	8	9	10	11	12
1.Awareness	5,1	0.59	1	-0.46**	0.60**	0.44**	0.40**	0.48**	0.43**	0.36**	0.38**	0.41**	0.41**	0.48**
2.Nonjudgment	2,3	0.95		1	-0.43**	-0.42**	-0.35**	-0.24**	-0.31**	-0.26**	-0.28**	-0.27**	-0.16**	-0.38**
3.Refocusing	5,1	0.69			1	0.35**	0.39**	0.47**	0.51**	0.39**	0.39**	0.38**	0.38**	0.42**
4. Perfectionist	3,1	0.63				1	0.60**	0.44**	0.45**	0.48**	0.54**	0.43**	0.48**	0.63**
5.Helping	3,2	0.66					1	0.54**	0.39**	0.38**	0.56**	0.58**	0.45**	0.59**
6.Achieving	3,3	0.55						1	0.46**	0.40**	0.50**	0.54**	0.62**	0.46**
7.Original	3,1	0.62							1	0.48**	0.52**	0.50**	0.49**	0.42**
8.Observing	3,1	0.60								1	0.54**	0.37**	0.50**	0.57**
9.Questioning	3,1	0.57									1	0.57**	0.53**	0.55**
10.Adventurous	3,1	0.63										1	0.47**	0.51**
11.Chieftain	3,3	0.70											1	0.50**
12.Comromising	3,0	0.68												1

***significant at p<0.01, *significant at p<0.05*

Cleophas and Zwinderman (2018) portrayed Pearson correlation analysis as a statistical method used to evaluate the strength and direction of the linear association between two continuous variables. In correlation-based research, it can be stated that a correlation coefficient of 0.1 represents a low relationship, coefficients between 0.3 and 0.69 represent a medium relationship, and values greater than 0.7 represent a strong relationship (Gardner & Neufeld, 2013). However, in psychological research, a correlation coefficient of 0.5 as representing a strong relationship (Mitchell, 2004).

The correlation results between the sub-dimensions in Table 3 showed a strong and positive relationship between the awareness and refocusing sub-dimensions (r =0.60), and a negative and moderately significant relationship with the non-judgement sub-dimension (r = -0.46).

Overall, the study found medium- and low-level significant relationships, but the negative relationship of the non-judgmental sub-dimension with all other sub-dimensions stands out. Considering the highest correlations reached, it is noteworthy that the perfectionism sub-dimension and the helping (r =0.60) and compromising (r =0.63) sub-dimensions had a highly positive and significant relationship.

Table 4. Multiple linear regression analysis

1 – First Part							
Model	**B**	±	**(β)**	**T**	**p**	**VIF**	P=0.000
Constant	2.861	.245		11.675	0.000		$F_{(9,197)}$=11.795
Achieving	0.253	0.088	0.233	2.86	0.005	2.01	D-W=1.951
Original	0.162	0.072	0.169	2.246	0.026	1.71	R=0.592
Compromising	0.192	0.076	0.219	2.516	0.013	2.29	R^2=0.35
							Adj.R^2=0.32
Dependent Variable: Awareness Sub-Dimension							
2- Second Part							
Model	**B**	±	**(β)**	**T**	**p**	**VIF**	P=0.000
Constant	4.880	0.429		11.362	0.000		$F_{(9,197)}$=6.807
Perfectionist	-0.360	0.135	-0.238	-2.673	0.008	2.051	D-W=2.134
Orjginal	-0.258	0.126	-0.167	-2.045	0.042	1.71	R=0.487
Chieftain	0.262	0.120	0.191	2.179	0.031	1.98	R^2=0.237
Compromising	-0.264	0.134	-0.186	-1.977	0.049	2.29	Adj.R^2=0.202
Dependent Variable: Nonjudgment Sub-Dimension							
3- Third Part							
Model	**B**	±	**(β)**	**T**	**p**	**VIF**	P=0.000
Constant	2.250	0.287		7.852	0.000		$F_{(9,197)}$=12.249
Achieving	0.307	0.103	0.241	2.979	0.003	2.011	D-W=1.73
Original	0.368	0.084	0.327	4.373	0.000	1.716	R=0.599
							R^2=0.359
							Adj.R^2=0.33
Dependent Variable: Refocusing Sub-Dimension							

The equation (mathematical model) of the 3 models of three regression analysis models is given below.

Awareness[1]**=** 2.861 + (0.233 achieving) + (0.169 original) + (0.219 compromising)

Nonjudgment[2]**=** 4.880 + (-0.238 perfectionist) + (-0.167 original) + (-0.186 Chieftain) + (0.191 compromising)

Refocusing[3]**=** 2.250 + (0.103 achieving) + (0.084 original)

Regression analysis is a statistical method used to model the relationship between a dependent variable and independent variables. Researchers use it to understand how changes in independent variables affect the dependent variable, considering other factors (Cooper & Glaesser, 2010). In the current study, we conducted multiple linear regression analysis on three distinct models, where the dependent variables were awareness, non-judgement, and refocusing, the sub-dimensions of athlete mindfulness, and the independent variables were nine

sub-dimensions of The Enneagram Personality Test. We report the statistically significant results for each model.

Variance inflation factor (VIF) values were analyzed to determine the multicollinearity problem among the independent variables in the model. Considering that examining this value can provide more accurate results (Folli et al., 2020), the VIF value is expected to be below five (Geurkink et al., 2021). The fact that the VIF values in all three models are at the desired level reveals that there is no multicollinearity problem among the independent variables in the models. However, since the Durbin-Watson (D-W) values, which reveal the autocorrelation status, are between 1.5 and 2.5, no autocorrelation was found (Chen, 2016).

The regression model between the Achieving, Original and Compromising sub-dimensions, which were included as independent variables in the model in the first part, and the Awareness dependent variable was found to be statistically significant ($F_{(df=9,197)=}11.795$, $p<0.001$). On the other hand, while the R^2 value of the first model was 0.35 and the adjusted R^2 value was 0.32, 35% of the variance in soccer players' mindfulness levels was explained by achieving, original, and compromising personality types. When the Beta values of the first model were analyzed, the study concluded that achieving (β =0.233), original (β =0.169), and compromising (β =0.219) personality types exerted significant and positive effects.

In the second part, analyzed within the scope of the model, the non-judgment factor is the dependent variable, while the sub-factors belonging to the Perfectionist, Original and Chieftain Personality Types are the independent variables. While it was observed that the second model was significant ($F_{(9,197)}=6.807$, $p<0.001$), $R^2 = 0.237$ and adjusted $R^2 = 0.202$ were calculated. In the second model, approximately 24% of the variance in the non-judgmental levels of the athletes is explained by the Perfectionist, Authentic, Chieftain and Compromising Personality Types. Beta values of the model were found to have significant negative effects for the Perfectionist (β= -0.238), Original (β= -0.167) and Compromising (β= -0.186) types, and significant positive effects for the Chieftain (β=0.191) type.

The third model, in which the refocusing sub-dimension produced significant results as the dependent variable and the Achieving and Original sub-dimensions as the independent variables, was statistically significant ($F_{(9,197)}$= 12.249, $p<0.001$). In the third model, R^2 =0.359 and adjusted R^2 = 0.33, whereas the Achieving and Original personality types explained approximately 36% of the variance in the dependent variable. In addition, the beta values Achieving (β= 0.241) and Original (β= 0.327) have a significant positive effect.

DISCUSSION AND CONCLUSION

This study aimed to explore the relationship between soccer players' Enneagram personality types and their mindfulness levels. Overall, the findings support the proposed hypotheses and point to a nuanced interplay between personality dimensions and facets of mindfulness.

The first hypothesis, which proposed a significant association between Enneagram subtypes and mindfulness dimensions, was supported. The observed positive correlation between awareness and refocusing seems intuitive; increased awareness equips athletes with the perceptual information needed to shift attention meaningfully. In practical terms, a player who is alert to their opponent's strategies can more easily adjust their own focus mid-game. However, the negative relationship between awareness and non-judgment presents an interesting paradox. As athletes become more attuned to their environment, they might also become more evaluative—less able to maintain a neutral or accepting stance. This duality reflects the cognitive demands of competitive sport, where awareness often comes hand-in-hand with split-second analysis and judgment. As Göncü and Balcı (2023) noted, attentional processes in sports are complex and evolve with experience, though this link is not always consistent across studies (Kesler, 2020).

A particularly noteworthy finding was the positive correlation between the non-judgmental dimension and the perfectionist, helping, and compromising personality types. These types share a tendency toward interpersonal sensitivity and self-awareness. While perfectionism is often seen as self-critical, it can be tempered by non-judgment, allowing athletes to accept errors without harsh self-evaluation. Similarly, helper types may act from empathy rather than from a desire for approval, and compromisers may navigate team situations more flexibly when judgment is suspended. In a football setting, a team captain who exhibits these traits may respond to teammates' mistakes with calm understanding, rather than blame, which can foster a more cohesive and psychologically safe team environment. This aligns with Bland's (2010) view of the Enneagram as a tool for self-growth and flexible thinking—qualities highly valued in competitive sports. Moreover, as Lotfi et al. (2023) argue, understanding personality structures may enable coaches to tailor their leadership to better support athletes.

The second hypothesis, tested through multiple regression, found that perfectionist, original, and compromising types positively predicted the awareness dimension of mindfulness. These personality types seem to share an openness to reflection and adaptation. Perfectionists

tend to be self-disciplined and constantly striving; originals are meaning-oriented and introspective; compromisers are focused on harmony and teamwork. These qualities can lead to increased sensitivity to both internal states and external demands. In sport, this could translate to players being more aware of not only tactical cues but also their emotional and physical responses during a match. Flett and Mikail (2017) also highlight this link between perfectionism and mindfulness. Similarly, Wagner (2008) found that mindfulness practices enhance emotional awareness across Enneagram types.

The third hypothesis revealed a more complex relationship: perfectionist, original, and compromising types negatively predicted non-judgment. At first, this seems to contradict earlier findings. However, while these types may be more aware and open to growth, their internal standards or desire for social harmony may make it difficult to suspend evaluative thinking. For instance, a perfectionist may still harshly judge their own performance, even if they are aware of it in real-time. On the other hand, the chieftain personality type was positively associated with non-judgment. Though this type can be critical—especially toward perceived weakness—Riso and Hudson (1999) note that when chieftains cultivate acceptance, they can become compassionate leaders. In a team context, this could explain why captains with a chieftain-like profile may choose to protect rather than criticize their teammates, prioritizing team unity over personal judgment.

The final hypothesis, which examined the influence of personality on the refocusing dimension, also yielded meaningful insights. Both achieving and original personality types were positive predictors of refocusing. Achievers are typically driven and outcome-focused, and this motivation likely helps them shift attention back to performance goals. Originals, by contrast, tend to find deeper meaning in tasks, which may serve as a psychological anchor during distractions. In high stakes matches, both types may benefit from these internal motivators, allowing them to maintain or restore focus when needed.

To conclude, the findings of this study demonstrate that mindfulness is not shaped by a single personality profile but is rather differentially influenced by various Enneagram types. Traits like perfectionism and compromise appear to promote certain elements of mindfulness (e.g., awareness), while potentially hindering others (e.g., non-judgment). This duality underscores the importance of individualized approaches in psychological training. For practitioners and coaches, these insights offer a practical roadmap: mindfulness interventions tailored to athletes' personality traits may enhance not only individual well-being but also team

cohesion and performance. Future research might explore how these patterns play out across different sports and levels of competition, and whether training grounded in personality-mindfulness dynamics yields long-term benefits.

Recommendations

This study revealed significant relationships and effects between football players' mindfulness and enneagram personality types, demonstrating that enneagram personality types can predict athletes' mindfulness levels**.** Researchers who will conduct scientific studies in the future can investigate the differences in the cognitive awareness levels of the dominant personality type or types, and how this situation affects the performance of athletes by conducting applications for the awareness of athletes with each enneagram personality type.

In addition, researchers can investigate the personality types of soccer players according to their positions and determine which personality type is more ideal**.**

Limitations and strengths

The reliance on self-report measures in this study might have introduced potential biases, and the cross-sectional design might have constrained the ability to draw causal inferences regarding the relationships between personality types and mindfulness. The conclusions of the study may be influenced by potential confounding variables that were not fully addressed in the analysis.

Despite these limitations, this study had several strengths. This study investigates a novel combination of Enneagram personality types and athlete mindfulness by employing validated measurement tools adapted for the Turkish context. Multiple statistical approaches, including correlation and regression analyses, facilitate a comprehensive examination of these relationships. These findings provide valuable insights for coaches and sports psychologists, contributing to the understanding of athletic performance and well-being. Furthermore, the study enhances the body of research on mindfulness in sports contexts, with the enneagram model offering a nuanced perspective on personality types compared to other frameworks.

While methodologically constrained, this study offers valuable initial insights into the relationships between personality types and mindfulness among football players, thereby paving the way for future research to refine and expand our understanding of these psychological constructs in athletic settings.

REFERENCES

Aktepe, İ., & Tolan, Ö. (2020). Bilinçli farkındalık: Güncel bir gözden geçirme. *Psikiyatride Güncel Yaklaşımlar*, *12*(4), 534-561.

Alexander, M., & Schnipke, B. (2020). The Enneagram: A primer for psychiatry residents. *American Journal of Psychiatry Residents' Journal*, *15*(3), 2-5.

Arkonaç, S. A. (1998). *Psikoloji: Zihin süreçler bilimi* (2. Baskı). Alfa Yayıncılık.

Batı, U. (2012). *Enneagram ile kişilik analizi. A*lfa Yayınları.

Bishop, S. R., Lau, M., Shapiro, S., Carlson, L., Anderson, N. D., Carmody, J., … et al. (2004). Mindfulness: A proposed operational definition. *Clinical psychology: Science and practice*, *11*(3), 230.

Bland, A. M. (2010). The Enneagram: A review of the empirical and transformational literature. *The Journal of Humanistic Counseling, Education and Development*, *49*(1), 16-31.

Boutyline, A. (2017). Improving the measurement of shared cultural schemas with correlational class analysis: Theory and method. *Sociological Science*, *4*, 353-393.

Brown, K. W., Ryan, R. M., & Creswell, J. D. (2007). Addressing fundamental questions about mindfulness. *Psychological inquiry*, *18*(4), 272-281.

Chen, Y. (2016). Spatial autocorrelation approaches to testing residuals from least squares regression. *PloS One*, *11*(1).

Cleophas, T. J., & Zwinderman, A. H. (2018). *Modern Bayesian statistics in clinical research* (No. 144477). Cham, Switzerland: Springer.

Cohen, J. (2013). *Statistical power analysis for the behavioral sciences*. Routledge.

Cooper, B., & Glaesser, J. (2010). Contrasting variable-analytic and case-based approaches to the analysis of survey datasets: exploring how achievement varies by ability across configurations of social class and sex. *Methodological Innovations Online*, *5*(1), 3-23.

Çetın, M. Ç., & Kara, M. (2024). Sporda etkili karar verme ölçeği (SEKVÖ): Geçerlik ve güvenirlik çalışması. *Gazi Beden Eğitimi ve Spor Bilimleri Dergisi*, *29*(1), 40-52.

Daniels, D., & Price, V. (2009). *The essential enneagram: The definitive personality test and self-discovery Guide--Revised & Updated*. Harper Collins.

Daniels, D., Saracino, T., Fraley, M., Christian, J., & Pardo, S. (2018). Advancing ego development in adulthood through study of the enneagram system of personality. *Journal of Adult Development*, *25*, 229-241.

Dymond, S., & Barnes, D. (1997). Behavior-analytic approaches to self-awareness. *The Psychological Record*, *47*, 181-200.

Fife, D. (2020). The eight steps of data analysis: A graphical framework to promote sound statistical analysis. *Perspectives on Psychological Science*, *15*(4), 1054-1075.

Flett, G. L., & Mikail, S. F. (2017). *Perfectionism: A relational approach to conceptualization, assessment, and treatment*. Guilford Publications.

Folli, G. S., Nascimento, M. H., de Paulo, E. H., da Cunha, P. H., Romao, W., & Filgueiras, P. R. (2020). Variable selection in support vector regression using angular search algorithm and variance inflation factor. *Journal of Chemometrics*, *34*(12).

Franco, C., & Maitra, P. (2023). Combining surveys in small area estimation using area-level models. *Wiley Interdisciplinary Reviews: Computational Statistics*, *15*(6).

Gardner, R. C., & Neufeld, R. W. (2013). What the correlation coefficient really tells us about the individual. *Canadian Journal of Behavioural Science / Revue Canadienne des Sciences du Comportement*, *45*(4), 313–319.

Gauthier, J. A., Widmer, E. D., Bucher, P., & Notredame, C. (2010). Multichannel sequence analysis applied to social science data. *Sociological Methodology*, *40*(1), 1-38.

Gethin, R. (2011). On some definitions of mindfulness. *Contemporary Buddhism*, *12*(1), 263-279.

Geurkink, Y., Boone, J., Verstockt, S., & Bourgois, J. G. (2021). Machine learning-based identification of the strongest predictive variables of winning and losing in Belgian professional soccer. *Applied Sciences*, *11*(5).

Göncü, B. S., & Balcı, B. (2023). Sporda mücadele ve tehdit algısı açısından bilinçli farkındalığın önemi. *International Journal of Sport Exercise and Training Sciences-IJSETS*, *9*(2), 59-60.

Hoe, S. L. (2008). Issues and procedures in adopting structural equation modelling technique. *Journal of Quantitative Methods*, *3*(1), 76.

Hook, J. N., Hall, T. W., Davis, D. E., Van Tongeren, D. R., & Conner, M. (2021). The Enneagram: A systematic review of the literature and directions for future research. *Journal of Clinical Psychology*, *77*(4), 865-883.

Huffman, L., Lefdahl-Davis, E. M., & Alayan, A. (2022). The Enneagram and the college student: Empirical insight, legitimacy, and practice. *Christian Higher Education*, *21*(3), 214-232.

Jayawickreme, E., Fleeson, W., Beck, E. D., Baumert, A., & Adler, J. M. (2021). Personality dynamics. *Personality Science*, *2*(1).

Kabat-Zinn, J. (2005). *Coming to our senses: Healing ourselves and the world through mindfulness*. Hachette UK.

Kam, C. (2024). Enhancing enneagram therapy with contemporary research on the conscious and unconscious mind. *Integrative Psychological and Behavioral Science*, *58*(2), 711-730.

Kang, Y. H., Petzschner, F. H., Wolpert, D. M., & Shadlen, M. N. (2017). Piercing of consciousness as a threshold-crossing operation. *Current Biology*, *27*(15), 2285-2295.

Kara, N. Ş., & Dönmez, A. (2022). Sporda enneagram kişilik tipleri. *Journal of ROL Sport Sciences*, *3*(1), 73-81.

Kesler, E. (2020). *Elit güreşçilerde bilinçli farkındalık, sürekli optimal performans duygu durumu, spora katılım motivasyonu ve stres düzeylerinin incelenmesi* [Yüksek lisans tezi, Sakarya Uygulamalı Bilimler Üniversitesi].

Leech, N. L., Barrett, K. C., & Morgan, G. A. (2014). *IBM SPSS for intermediate statistics: Use and interpretation*. Routledge.

Lotfi, A., Barghi, T. S., Dargahi, H., Memari, A., & Rakhshan, A. (2023). Investigating the mediating role of leadership style in the relationship between personality type and the performance of the staff, captains, supervisors, and medics in Tehran's soccer clubs. *Asian Journal of Sports Medicine*, *14*(2).

Maitri, S. (2018). Enneagramın spritüel boyutu. *Omega Yayınları*.

Marsh, H. W., & Hocevar, D. (1985). Application of confirmatory factor analysis to the study of self-concept: First-and higher order factor models and their invariance across groups. *Psychological Bulletin*, *97*(3), 562.

Mitchell, H. (2004). A correlation coefficient for intuitionistic fuzzy sets. *International Journal of İntelligent Systems*, *19*(5), 483-490.

Mithen, S., Renfrew, C., & Zubrow, E. B. W. (1998). From domain specific to generalized intelligence: A cognitive interpretation of the Middle/Upper Paleolithic transition. *Reader in archeological theory: Post-Processual and Cognitive Approaches*, 137-156.

Öntürk, Y., Karacabey, K., & Özbar, N. (2019). Günümüzde spor denilince ilk akla neden futbol gelir? Sorusu üzerine bir araştırma. *SPORMETRE Beden Eğitimi ve Spor Bilimleri Dergisi, 17*(2), 1-12.

Riso, D. R., & Hudson, R. (1999). *The wisdom of the Enneagram: The complete guide to psychological and spiritual growth for the nine personality types*. Bantam Books.

Rutkowski, T. M., Abe, M. S., Komendzinski, T., Sugimoto, H., Narebski, S., & Otake-Matsuura, M. (2023). Machine learning approach for early onset dementia neurobiomarker using EEG network topology features. *Frontiers in Human Neuroscience*, *17*, 11-55.

Sayre-Adams, J. (2003). The Enneagram-a means to psychological and spiriutual awareness. *Spirituality and Health International*, *4*(4), 24-31.

Subas, A., & Çetin, M. (2024). Enneagram kişilik ölçeğinin geliştirilmesi: güvenirlik ve geçerlilik çalışması. *The Journal of Social Sciences*, *11*(11), 160-181.

Tatlılıoğlu, K. (2010). *Farklı öz-anlayış düzeylerine sahip üniversite öğrencilerinin karar vermede özsaygı, karar verme stilleri ve kişilik özelliklerinin değerlendirilmesi* [Doktora tezi, Atatürk Üniversitesi].

Thienot, E., Jackson, B., Dimmock, J., Grove, J. R., Bernier, M., & Fournier, J. F. (2014). Development and preliminary validation of the mindfulness inventory for sport. *Psychology of Sport and Exercise*, *15*(1), 72-80.

Tingaz, E. O. (2020). Adaptation of the mindfulness inventory for sport into Turkish: A validity and reliability study. *Journal of Education and Learning*, *9*(2), 153–160.

Tlemsani, I., Mohamed Hashim, M. A., Matthews, R., Ndrecaj, V., & Mason-Jones, R. (2023). An Enneagram approach to strategy. *Administrative Sciences*, *13*(5), 119.

Türk Dil Kurumu. (2011). *Büyük Türkçe Sözlük*. Ankara: Türk Dil Kurumu Yayınları.

Wagner, J. (2008). Eneagram styles and maladaptive schemas: A research inquiry. *Enneagram Journal*, *1*(1).

Yüksel, Ö. (2006). *Davranış bilimleri,* Gazi Kitapevi.

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Fikir ve Kavramsal Örgü *Idea or Notion*	Araştırma hipotezini veya fikrini oluşturmak *Form the research hypothesis or idea*	Mehmet KARA
Tasarım *Design*	Yöntem ve araştırma desenini tasarlamak *To design the method and research design.*	Şeyma KARA
Literatür Tarama *Literature Review*	Çalışma için gerekli literatürü taramak *Review the literature required for the study*	Mehmet KARA
Veri Toplama ve İşleme *Data Collecting and Processing*	Verileri toplamak, düzenlemek ve raporlaştırmak *Collecting, organizing and reporting data*	Şeyma KARA
Tartışma ve Yorum *Discussion and Commentary*	Elde edilen bulguların değerlendirilmesi *Evaluation of the obtained finding*	Murat GENÇ

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This research was conducted with the decision of Mustafa Kemal University Ethics Committee dated 08.10.2024 and numbered 902-01-FR 006