



An Examination of the Relationship Between Cognitive Flexibility and Leadership Orientations and Demographic Differences: A Study of University Athletes

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Abstract: The aim of the study is to examine the relationship between university athletes' cognitive flexibility levels and their leadership orientations. The research group consists of 342 students studying at the Faculty of Sports Sciences at Selçuk University. The study was designed using a correlational survey model. The data collection tools used in the study were a 'personal information form', the "Cognitive Flexibility Scale (CFS)" and the "Multidimensional Leadership Orientations Scale (MLOS)". Normality analysis was carried out before data analysis, and parametric tests were applied to data that displayed a normal distribution and non-parametric tests to data that did not. Cronbach's Alpha analysis was applied to examine the internal consistency values of the data. In conclusion, no significant difference was found between the participants' genders and their cognitive flexibility and leadership orientations. In terms of the sport type variable, while no significant difference was found in the participants' cognitive flexibility levels, a significant result was found in their leadership orientations in favour of those who played team sports in the human-centred leadership dimension. No significant relationship was found in cognitive flexibility in the age variable, while a negative significant relationship was observed in leadership orientations in the human-centred leadership dimension. In conclusion, no statistically significant relationship was found between participants' levels of cognitive flexibility and their leadership orientations.

Keywords: Cognitive flexibility, Leadership orientations, University students, Sport

Bilişsel Esneklik ile Liderlik Yönelimleri Arasındaki İlişkinin ve Demografik Farklılıkların İncelenmesi: Üniversiteli Sporcular Üzerine Bir Araştırma

Öz: Araştırmanın amacı üniversiteli sporcuların bilişsel esneklik düzeyleri ile liderlik yönelimleri arasındaki ilişkinin incelenmesidir. Araştırma grubu Selçuk Üniversitesi Spor Bilimleri Fakültesinde öğrenim gören 342 öğrenciden oluşmaktadır. Araştırma ilişkisel tarama modelinde tasarlanmıştır. Araştırmada veri toplama aracı olarak "kişisel bilgi formu", "Bilişsel Esneklik Ölçeği (BEÖ)" ve "Çok Yönlü Liderlik Yönelimleri Ölçeği (ÇYLYÖ)" kullanılmıştır. Veri analizine geçilmeden önce normallik analizi yapılmış ve normal dağılım gösteren veriler için parametrik, normal dağılım göstermeyen veriler için ise nonparametrik testler kullanılmıştır. Verilerin iç tutarlık değerlerinin incelenmesi amacıyla Cronbach's Alpha analizi uygulanmıştır. Sonuç olarak, katılımcıların cinsiyetleri ile bilişsel esneklik ve liderlik yönelimleri arasında anlamlı farklılık tespit edilmemiştir. Spor türü değişkeni açısından ise katılımcıların bilişsel esneklik düzeylerinde anlamlı farklılık bulunmazken, liderlik yönelimlerinde insan kaynaklı liderlik boyutunda takım sporu yapanlar lehine anlamlı sonuç saptanmıştır. Yaş değişkeninde bilişsel esneklikte anlamlı ilişki bulunmazken, liderlik yönelimlerinde insan kaynaklı liderlik boyutunda negatif yönlü anlamlı ilişki görülmüştür. Ayrıca, katılımcıların bilişsel esneklik düzeyleri ile liderlik yönelimleri arasında ise istatistiksel olarak anlamlı ilişki tespit edilmemiştir.

Anahtar Kelimeler: Bilişsel esneklik, Liderlik yönelimleri, Üniversite öğrencileri, Spor

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INTRODUCTION

Cognitive flexibility can be defined as an individual's ability to adapt to new information and experiences. This concept refers to an individual's ability to quickly adapt or change their attitudes, emotions, and behaviours in response to new information from external sources (Canas et al., 2003). The concept of cognitive flexibility is also thought to be closely related to the concept of leadership, which is the ability to cope with unpredictable situations (Stevens, 2009). A leader is a pioneering individual who guides, directs, and shows the way to a group in line with their goals (Yenel, 2018). A leader is also someone who takes initiative, is committed to the group they oversee, and is a source of inspiration (Gündoğdu, 2024). Leadership orientations are defined as various methods used to direct a group towards a goal and to identify and solve problems along the way (Dursun et al., 2019). Bolman and Deal (1991) defined leadership orientations as the many strategies leaders employ to accomplish their goals and to recognize and address issues along the way. The organizational and planning aspects of leadership are represented by the structural framework in Bolman and Deal's four-framework model. In regard to leadership, the human resources framework emphasizes the human—that is, the employee—dimension of the organization. The third component, the political framework, includes methods for reaching agreements and resolving disputes in addition to power dynamics. On the other hand, viewpoints on organizational culture that give labor meaning and purpose are represented by the symbolic framework (Bolman & Deal, 1991). The relationship between cognitive flexibility and leadership orientations may also be related to an individual's response to changes in their environment, such as crises and uncertainty. In this case, individuals with high levels of cognitive flexibility will be able to better motivate their employees or colleagues and demonstrate a more efficient management style (Altınışık & Çelik, 2022; Canas et al., 2003). Leaders with cognitive flexibility can adapt quickly to changing conditions and generate innovative solutions within their circumstances (Han et al., 2011). This characteristic increases the leader's sensitivity to environmental factors and provides them with a broader perspective when making strategic decisions (Arslan & Uğurlu, 2017). Cognitive flexibility is considered particularly important in leadership styles such as transformational leadership and situational leadership.

Transformational leaders demonstrate creative, adaptable, and flexible approaches when setting goals and visions. Therefore, a leader with high cognitive flexibility can help their employees adapt more easily to new developments, as this leadership style prioritises innovation, transformation, and motivation (Gümüşlüoğlu & İlsev, 2009). Transformational leaders, because they possess cognitive flexibility, can respond to their employees' emotional states and find innovative solutions to achieve organisational goals, as they can quickly adapt to any crisis or change (Sürürcü et al., 2020). On the other hand, situational leadership theory argues that a leader's actions should vary according to the characteristics of the company and its personnel (Edwards, 2008; Tabak, 2001). This leadership style, which is linked to the cognitive flexibility approach, allows the leader to determine their management style according to the requirements of the environment in which they operate. Here, it can be stated that an individual with high

cognitive flexibility can achieve more successful results because they can adapt the style they exhibit to the desires and needs of employees.

Cognitive flexibility helps leaders adapt to changing external conditions, manage risks, and generate more creative solutions, so leaders are expected to be more successful in achieving organisational goals. Increasing leaders' cognitive flexibility can enhance the effectiveness of leadership tactics, particularly in dynamic conditions such as the rapidly evolving commercial world and crisis situations (Gülüm & Dağ, 2012).

In sports science, the link between cognitive flexibility and leadership orientations is even more pronounced. Students who will become the coaches, teachers, and managers of the future must possess high cognitive flexibility to cope with the challenges they face. A coach must be able to quickly change in-game tactics and game plans in response to changes in the opposing team's playing style. On the other hand, since managers need to inspire their employees and constantly offer them creative solutions in any crisis situation, this type of adaptability is also considered to be consistent with leadership orientation.

In the context of competitive sport, where stress levels are high and the need for rapid decision-making is significant, research into the multifaceted nature of the interaction between these two dynamics is quite limited in the literature; yet the concepts of cognitive flexibility and leadership orientations play a vital role in determining individuals' capacity to adapt to complex situations and guide groups. This study aims to fill a gap in the literature on sports psychology and organisational behaviour by employing a comprehensive approach to demonstrate, using a sample comprising primarily university athletes, how cognitive flexibility—a measure of mental adaptability—shapes leadership profiles and how this relationship varies across different demographic variables. This research demonstrates its fundamental academic value by providing evidence-based, creative and practice-oriented intervention strategies to help coaches, sports administrators and educators maximise the potential leadership skills of university athletes by developing their cognitive flexibility, whilst also strengthening the theoretical framework through the empirical testing of the relationship between these two variables.

In light of all this information, the aim of this article is to examine whether there are differences in the levels of cognitive flexibility and leadership orientation among university athletes according to different demographic parameters. The following hypotheses were formulated as part of the research.

H₁: Cognitive flexibility and leadership orientations vary by gender.

H₂: Cognitive flexibility and leadership orientations vary depending on the sport.

H₃: There is a significant positive correlation between cognitive flexibility and leadership orientations and age.

H₄: There is a significant positive correlation between cognitive flexibility and leadership orientations.

METHOD

Research Model: This study employed a quantitative research design utilizing a correlational survey model. While quantitative methods allow for the statistical analysis of numerical data (Garip, 2023), the correlational approach specifically examines whether two or more variables co-vary, revealing both the direction and nature of their relationship (Karasar, 2023).

Research Group: The research group consists of 342 students enrolled at Selçuk University Faculty of Sports Sciences in the 2025-2026 academic year. Convenience sampling was used to determine the students participating in the study. Convenience sampling is a non-random sampling method that aims to reach those who are easily accessible to the researcher and who agree to participate in the study (Gravetter& Forzano, 2012; Malhotra, 2010).

Table 1. Participants' gender and sports type distribution

Variable		f	%
Gender	Female	166	48,5
	Male	176	51,5
	Total	342	100,0
Sports Type	Individual	170	49,7
	Team	172	50,3
	Total	342	100,0

Data Collection Tools: During the implementation of data collection tools, the person administering the questionnaire in the classroom provided participants with the necessary explanations, and it was assumed that participants completed the questionnaire correctly.

The questionnaire consists of two sections: the first section is the “Personal Information Form” and the second section is the “Cognitive Flexibility” and “Multidimensional Leadership Orientations Scale”. As the study sample consisted of students, the leadership orientation scale developed by Dursun et al. (2019) was used. The items in other scales measuring leadership orientations are not suitable for students.

The Personal Information Form consists of three items determined and prepared by the researcher. These items determine the students' gender, age, and the type of sport they are engaged in.

Cognitive Flexibility Scale (CFS): The scale was developed by Martin and Rubin (1995), and its adaptation into Turkish was carried out by Altunkol (2011). The scale was designed to determine individuals' levels of cognitive flexibility and consists of a total of 12 items with a 6-point Likert-type rating structure. The total score obtained from the scale is calculated by summing the responses given to each item. Accordingly, the lowest possible score on the scale

is 12, and the highest possible score is 72. High total scores indicate that the individual has a high level of cognitive flexibility, while low scores indicate a low level of cognitive flexibility. Various studies on the reliability of the scale have reported Cronbach's alpha internal consistency coefficients ranging from ,72 to ,87 (Altınkol, 2011).

Multidimensional Leadership Orientations Scale (MLOS): Developed by Dursun et al. (2019). The scale consists of 19 items in total and examines leadership orientations under four different dimensions. These dimensions are: Political Leadership (items 3, 6, 9, 10, and 11), Human Resource Leadership (items 2, 8, 12, 14, and 17), Charismatic Leadership (items 13, 15, 16, 18, and 19), and Structural Leadership (items 1, 4, 5, and 7). There are no items in the scale that require reverse coding. Examples of items included in the scale are: “I attach importance to completing planned tasks on time”, “I am successful in securing the support of influential people” and “I make an effort to resolve issues that arise between people”. Participants' responses to the items are evaluated on a five-point Likert scale ranging from “Strongly Agree” (5) to “Strongly Disagree” (1).

Data Analysis: Cronbach's Alpha internal consistency coefficients were calculated to determine the reliability levels of the Cognitive Flexibility and Multidimensional Leadership Orientations Scales (Table 2). “The evaluation criterion followed in assessing Cronbach's Alpha coefficient is $0.00 \leq \alpha < 0.40$ “not reliable”, $0.40 \leq \alpha < 0.60$ “low reliability”, $0.60 \leq \alpha < 0.80$ “fairly reliable”, $0.80 \leq \alpha < 1.00$ “highly reliable” (Alpar, 2013). Based on the data collected in our study, it was determined that the Cronbach's Alpha Coefficient values of the scales were highly reliable.

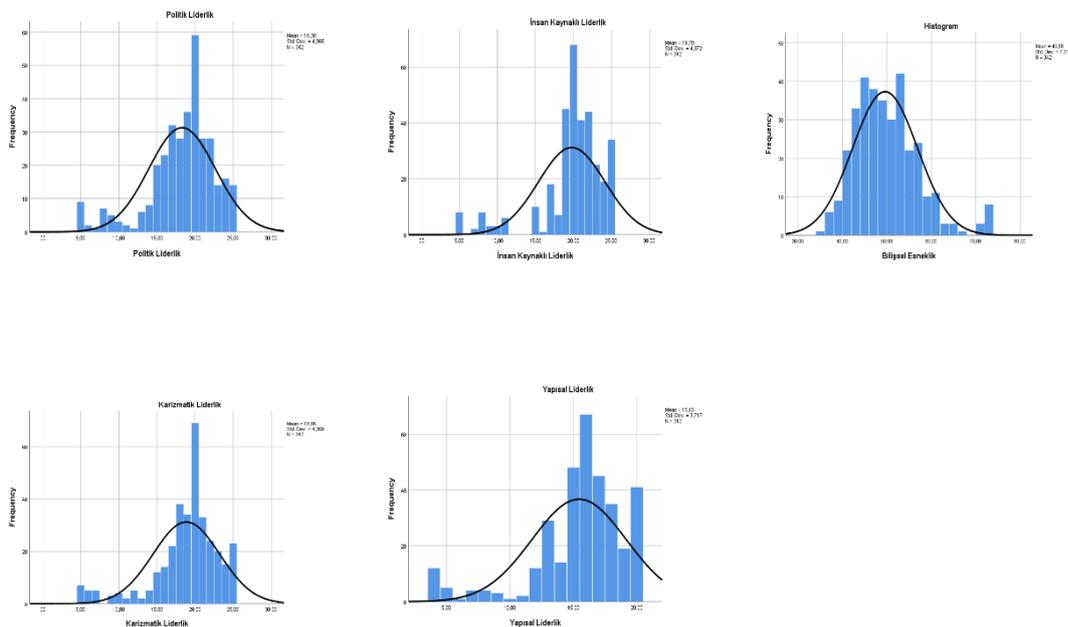
Table 2. Reliability cronbach's alpha value of the sub-dimensions of the cognitive flexibility and multidimensional leadership orientations scale

Scales	Cronbach's Alpha	N of Items
Cognitive Flexibility	,765	12
Leadership Orientations		
Political Leadership	,878	5
Human Resource Leadership	,886	5
Charismatic Leadership	,884	5
Structural Leadership	,890	4

In order to correctly determine the statistical analyses to be applied in the research, it is necessary to report statistical findings that demonstrate that fundamental assumptions such as linearity, stationarity, normality, and homogeneity are met. Once these assumptions have been demonstrated, researchers are expected to justify their choice of analysis methods along with their rationale (Tozoğlu & Dursun, 2020). These values are also provided in Table 3. It was found that the skewness and kurtosis values of the cognitive flexibility scale were close to each other, while the skewness and kurtosis values of the multidimensional leadership orientations scale sub-dimensions were not close to each other. Within the limits stated by George and Mallery (2003) (-1 to +1; -1.5 to +1.5; -2.0 to +2.0), it was accepted that the cognitive flexibility scale showed a normal distribution, while the sub-dimensions of the multidimensional leadership orientation scale did not show a normal distribution.

Table 3. Descriptive statistics for the sub-dimensions of the cognitive flexibility and multidimensional leadership orientations scale

	Cognitive Flexibility	Leadership Orientations			
		Political Leadership	Human Resource Leadership	Charismatic Leadership	Structural Leadership
N	342	342	342	342	342
Mean	49,58	18,30	19,78	18,86	15,45
Median	49,00	19,00	20,00	20,00	16,00
Mode	45,00	20,00	20,00	20,00	16,00
Std. Deviation	7,2	4,37	4,37	4,37	3,72
Skewness	,820	-1,152	-1,680	-1,345	-1,450
Kurtosis	,956	1,507	2,968	2,106	2,265



For data showing a normal distribution, a parametric “Independent Samples T-test” was applied to determine the difference between two different independent variables in participants' cognitive flexibility levels. For data not following a normal distribution, a non-parametric “Mann-Whitney U test” was applied to determine the difference between two different independent variables in participants' leadership orientation levels. Spearman correlation analyses were conducted to determine the relationship between participants' levels of cognitive flexibility and leadership orientations, and the results were evaluated according to a significance level of $p < .050$.

Ethical Approval and Institutional Permission: Ethical approval for the research was obtained from the Ethics Committee of the Faculty of Sports Sciences at Atatürk University on 24 October 2024, under reference number E-70400699-000-2400349532.

FINDINGS

Table 4. Comparison of cognitive flexibility levels according to participants' gender variable

Gender	N	Mean	Ss	t-test	
				t	p
Female	166	49,42	7,19	-,400	,689
Male	176	49,73	7,45		

The t-test analysis conducted to determine the difference in cognitive flexibility levels between female and male participants revealed no significant difference between female and male participants (t; -0.400 P; 0.689 > 0.050).

Table 5. Comparison of cognitive flexibility levels according to the type of sport practised by participants

Sport Type	N	Mean	Ss	t-test	
				t	p
Individual	170	49,25	7,16	-,834	,405
Team	172	49,91	7,48		

There was no discernible difference between individuals who play individual and team sports in terms of cognitive flexibility, according to the t-test analysis (t; -0.834 P; 0.405 > 0.050).

Table 6. Comparison of participants' levels of leadership orientation according to gender variable

Leadership Orientations	Gender	N	Mean Rank	Sum of Ranks
Political Leadership	Female	166	178,33	29603,50
	Male	176	165,05	29049,50
	Total	342		
Human Resource Leadership	Female	166	178,36	29607,00
	Male	176	165,03	29046,00
	Total	342		
Charismatic Leadership	Female	166	179,71	29831,50
	Male	176	163,76	28821,50
	Total	342		
Structural Leadership	Female	166	169,95	28211,50
	Male	176	172,96	30441,50
	Total	342		
	Political Leadership	Human Resource Leadership	Charismatic Leadership	Structural Leadership
Mann-Whitney U	13473,500	13470,000	13245,500	14350,500
Wilcoxon W	29049,500	29046,000	28821,500	28211,500
Z	-1,247	-1,255	-1,501	-,284
Asymp. Sig. (2-tailed)	,212	,209	,133	,776

The Mann-Whitney U test conducted to determine the difference between female and male participants' levels of leadership orientation revealed no significant difference between female and male participants at a significance level of $p < 0.050$.

Table 7. Comparison of leadership orientation levels according to the type of sport participants engage in

Leadership Orientations	Sport Type	N	Mean Rank	Sum of Ranks
Political Leadership	Individual	170	165,82	28190,00
	Team	172	177,11	30463,00
	Total	342		
Human Resource Leadership	Individual	170	156,27	26566,00
	Team	172	186,55	32087,00
	Total	342		
Charismatic Leadership	Individual	170	171,14	29094,50
	Team	172	171,85	29558,50
	Total	342		
Structural Leadership	Individual	170	164,07	27892,50
	Team	172	178,84	30760,50
	Total	342		
	Political Leadership	Human Resource Leadership	Charismatic Leadership	Structural Leadership
Mann-Whitney U	13655,000	12031,000	14559,500	13357,500
Wilcoxon W	28190,000	26566,000	29094,500	27892,500
Z	-1,061	-2,855	-,067	-1,392
Asymp. Sig. (2-tailed)	,289	,004	,947	,164

The Mann-Whitney U test analysis conducted to determine the differences in leadership orientation levels between participants who engage in individual and team sports revealed a significant difference between participants who engage in individual and team sports in the human-centred leadership sub-dimension (Z;-2.855 P; .004<.050). It was found that participants who practised team sports had a higher level of human-centred leadership than those who practised individual sports. No significant differences were found between participants who practised individual and team sports in the other sub-dimensions.

Table 8. Correlation analysis results between participants' age levels and their levels of cognitive flexibility and leadership orientations

	Cognitive Flexibility	Leadership Orientations			
		Political Leadership	Human Resource Leadership	Charismatic Leadership	Structural Leadership
Age	r	,035	-,132*	,013	-,038
	p	,517	,015	,817	,484

When examining the results of the correlation analysis conducted to determine the relationship between participants' age levels and cognitive flexibility levels, it was found that there was no significant relationship between participants' age levels and cognitive flexibility levels at the $p < .050$ significance level (r ; .035 p ; .517 > 0.050).

When examining the correlation analysis results conducted to determine the relationship between participants' age levels and leadership orientation levels, it was found that there was a negative and significant relationship between participants' age levels and human-centred

leadership orientation levels at a significance level of $p < .050$ (r ; -0.132^* , p ; $.015 < .050$). No significant relationship was found between age levels and leadership orientations in other leadership orientations.

Table 9. Correlation analysis results between participants' cognitive flexibility levels and leadership orientation levels

		Political Leadership	Human Resource Leadership	Charismatic Leadership	Structural Leadership
Cognitive Flexibility	r	-,003	-,006	-,041	,034
	p	,962	,916	,445	,530

When examining the results of the correlation analysis conducted to determine the relationship between participants' levels of cognitive flexibility and their levels of leadership orientation, it was found that there was no significant relationship between participants' levels of cognitive flexibility and their levels of leadership orientation at a significance level of $p < .050$.

DISCUSSION AND CONCLUSION

This study, which examined the relationship between cognitive flexibility and leadership orientations among university athletes, involved 342 students, 166 of whom were female and 176 of whom were male. The initial findings of the study revealed no significant difference between female and male participants in terms of leadership orientation levels. According to this research, athletes—regardless of gender—develop leadership traits that go beyond conventional gender roles because they are exposed to identical training schedules, competitive environments, and team dynamics. Additionally, the demographics of the sample group may have an impact on this result; as student athletes, they have not yet entered the industry or taken on official leadership positions in a professional setting.

A review of the literature reveals that Dursun (2025) found no significant difference between the leadership orientations and genders of students in their study titled “The Relationship Between Artificial Intelligence Attitudes and Leadership Orientations: A Study on Sport Sciences Students”. In the study by Saraçoğlu and Duman (2023), which examined the leadership orientations of coaches, it was stated that coaches' leadership orientations did not differ according to gender. This similarity can be interpreted as the perception of leadership in different sample groups being shaped by individual competencies or organisational culture rather than the gender factor. There are different studies in the literature that show similarities with our research finding (Güler et al., 2020; Koçak, 2025). In contrast to our research findings, the study conducted by Öztürk et al. (2010) found a significant difference between gender and leadership. The average scores of men were higher than those of women in the sub-dimensions of the scale.

When examining participants' genders and levels of cognitive flexibility, no statistically significant difference was found between the cognitive flexibility levels of female and male

participants. This situation can be explained by the fact that both genders require split-second tactical adjustments, stress management, and quick problem-solving in a competitive sporting setting. This allows them to develop a shared mental adaptability that is gender-neutral. A review of the literature reveals that a study conducted by Zong et al. (2010) on university students found no significant difference between cognitive flexibility and gender. A different study conducted by Martin and Rubin (1995) also found that women and men did not differ in their levels of cognitive flexibility. According to Bilgiç and Bilgin (2016), this indicates that cognitive flexibility is a gender-independent cognitive process and that both groups have similar capacities to adapt to changing situations. On the other hand, contrary to our research findings, a study conducted by Bayrakdaroğlu et al. (2022) revealed significant differences in favour of males in terms of gender. A different study conducted by Bilgin (2017) on adolescents also reported that males had higher levels of cognitive flexibility. Similarly, a study conducted by Asıcı and İkiz (2015) on university students reported that males had higher levels of cognitive flexibility than females. This situation can be explained by males' higher tendency to suppress their emotions, gender roles, and cultural expectations regarding emotional expression.

Another finding of the study revealed a significant difference between human-centred leadership and the type of sport variable, as determined by the analysis conducted to identify the differentiation between leadership orientations and the type of sport variable. It was found that participants who played team sports scored higher on the human-centred leadership sub-dimension than those who played individual sports. This may stem from the nature of team sports, which necessitate constant interaction, cooperation, and focus on a common goal. A study by Dilekçi (2023) in the literature also supports this finding; indeed, the relevant study found a significant difference in favour of those who play team sports in the charismatic leadership sub-dimension among sports high school students. Both studies show that team sports push individuals into a more active leadership role in terms of influencing others and managing human relations. On the other hand, it was observed that the sport type variable did not create a significant difference in sub-dimensions such as structural leadership and transformational leadership. This can be explained by the fact that the general disciplinary structure of sport and the motivation to achieve goals necessitate similar leadership behaviours regardless of the sport. Contrary to our research findings, a study conducted by Dursun et al. (2024) on teacher candidates found that participants' leadership orientations did not differ according to the type of sport they played.

The study found that athletes' levels of cognitive flexibility did not show a statistically significant difference based on the type of sport they practised. This finding can be explained by the fact that, regardless of the particular sport, athletes' mental flexibility skills are developed in a similar way due to common requirements inherent in all competitive sports, regardless of discipline, such as unpredictability, the capacity to quickly adapt to changing circumstances, and the management of immediate crises. In a study in the literature examining athletes' rumination and cognitive flexibility levels, no significant difference was found between the type of sport practised by athletes and their cognitive flexibility levels (Yılmaz et al., 2024). Similarly, a study conducted on elite wrestlers found that wrestling style had no significant

effect on either cognitive flexibility or stress coping sub-dimensions (Akyol & Taşkıran, 2023). The authors stated that the style factor did not play a distinguishing role in mental processes and stress management among elite wrestlers. The fundamental reason for this situation may be that elite athletes are exposed to training programmes of similar intensity, high levels of discipline, and similar psychological pressures, regardless of their sport or style.

Another finding of the study revealed no statistically significant relationship between participants' ages and their levels of cognitive flexibility. This indicates that cognitive flexibility is shaped independently of the age variable and that individuals' ability to adapt mentally tends to remain stable as they age. In the literature, a study conducted by Asırcı and İkiz (2015) on university students found no significant difference between the students' ages and their levels of cognitive flexibility. Similarly, another study on university students' cognitive flexibility and perceived stress levels found that students' levels of cognitive flexibility did not differ according to age. These results are consistent with our research findings.

When examined in terms of leadership orientations, a significant negative relationship was found between age and human-centred leadership orientation. This finding indicates that human-centred leadership approaches may decrease with increasing age. However, no significant age-related differences were found in other dimensions of leadership or in multidimensional leadership scores. This result parallels the study conducted by Koçak (2025) on classroom teachers, which indicated that age did not create a significant difference in leadership sub-dimensions. In the research conducted by Altınışık and Çelik (2022) on sports science faculty students, no significant difference was found between the students' ages and their leadership orientations.

The final finding of the study revealed no significant relationship between participants' levels of cognitive flexibility and their leadership orientations. This indicates that athletes' ability to generate alternative solutions and adapt to new situations is not a direct determining factor in the leadership styles or tendencies they exhibit. Contrary to expectations in the literature, this finding can be interpreted as suggesting that leadership behaviour in a sporting environment is influenced more by different environmental and situational variables, such as past sporting experience, personality traits, roles within the team, or coach-athlete interaction, rather than by cognitive processes. Similar studies in the literature show that cognitive flexibility supports technical-cognitive processes in athletes, particularly strategic decision-making, problem-solving, and mental resilience, but is not always a direct predictor of leadership orientations, which are a social interaction area (Gould & Wright, 2012). It has been found that leadership behaviours in the sports environment are more strongly explained by psychosocial variables such as the individual's emotional intelligence level, self-efficacy perception, and perceived support from the coach, rather than mental processes such as cognitive flexibility (Côté & Gilbert, 2009; Northouse, 2025). This supports the notion that the phenomenon of leadership is not merely a mental adaptation skill, but rather a multidimensional and situational construct that involves personality traits and social learning processes (Chelladurai, 2007). Consequently, the fact that university athletes' levels of cognitive flexibility do not significantly affect their

Dursun, M. (2026). Bilişsel esneklik ile liderlik yönelimleri arasındaki ilişkinin ve demografik farklılıkların incelenmesi: üniversiteli sporcular üzerine bir araştırma. *Beden Eğitimi ve Spor Bilimleri Dergisi*, 20(1), 128-141.

leadership orientations is consistent with the thesis that leadership development is based more on experiential and emotionally grounded processes.

Recommendations

Research findings suggest that leadership orientations among university-level athletes may be more closely related to the nature of the sport practised and the social interaction processes in which athletes are involved than to their levels of cognitive flexibility. Within this framework, it is recommended that coaches and sports administrators aiming to develop leadership potential in athletes prioritise psycho-social intervention programmes that strengthen athletes' social bonds and support their roles and sense of responsibility within the team. On the other hand, it is recommended that future research examine the relationship between cognitive flexibility and leadership by including different variables, using larger sample groups and longitudinal research designs.

REFERENCES

Akyol, G., & Taşkıran, C. (2023). Elit düzey güreşçilerin bilişsel esneklik düzeyleri ve stresle başa çıkma stratejileri. *Gazi Beden Eğitimi ve Spor Bilimleri Dergisi*, 28(4), 267-275.

Alpar, R. C. (2013). *Uygulamalı çok değişkenli istatistiksel yöntemler*. Detay Yayıncılık.

Altınışık, Ü., & Çelik, A. (2022). Spor bilimleri fakültesi öğrencilerinin liderlik yönelimleri ile duygusal zekâ düzeyleri arasındaki ilişkinin incelenmesi. *Spor Bilimleri Araştırmaları Dergisi*, 7(1), 225-236.

Altunkol, F. (2011). *Üniversite öğrencilerinin bilişsel esneklikleri ile algılanan stres düzeyleri arasındaki ilişkinin incelenmesi* [Yayımlanmamış yüksek lisans tezi]. Çukurova Üniversitesi.

Arslan, F., & Uğurlu, Ö. Y. (2017). 1997-2017 yılları arasında liderlik becerileri ile ilgili araştırmaların içerik analizi ile incelenmesi. *Yönetim ve Ekonomi Araştırmaları Dergisi*, 15(2), 62-80.

Asıcı, E., & İkiz, F. (2015). Mutluluğa giden bir yol: Bilişsel esneklik. *Mehmet Akif Ersoy University Journal of Education Faculty*, 1(35), 191-211.

Bayrakdaroğlu, Y., Şenel, E., & Karakuş, K. (2022). Çok yönlü liderlik ile duygu düzenleme arasındaki ilişki. *Spor Eğitim Dergisi*, 6(3), 228-239.

Bilgiç, R., & Bilgin, M. (2016). Ergenlerin cinsiyet ve öğrenim kademesi düzeylerine göre bilişsel esneklik düzeyleri ile karar stratejileri arasındaki ilişkinin incelenmesi. *Uşak Üniversitesi Eğitim Araştırmaları Dergisi*, 2(2), 39-55.

Bilgin, M. (2017). Ergenlerin beş faktör kişilik özelliği ile bilişsel esneklik ilişkisi. *Elektronik Sosyal Bilimler Dergisi*, 16(62), 945-954.

Bolman, L. G., & Deal, T. E. (1991). Leadership and management effectiveness: A multi-frame, multi-sector analysis. *Human Resource Management*, 30(4), 509-534.

Cañas, J., Quesada, J., Antolí, A., & Fajardo, I. (2003). Cognitive flexibility and adaptability to environmental changes in dynamic complex problem-solving tasks. *Ergonomics*, 46(5), 482-501.

Chelladurai, P. (2007). Leadership in sports. G. Tenenbaum & R. C. Eklund (Ed.), *Handbook of sport psychology* içinde (ss. 113-135). Wiley.

- Dursun, M. (2026). Bilişsel esneklik ile liderlik yönelimleri arasındaki ilişkinin ve demografik farklılıkların incelenmesi: üniversiteli sporcular üzerine bir araştırma. *Beden Eğitimi ve Spor Bilimleri Dergisi*, 20(1), 128-141.
- Côté, J., & Gilbert, W. (2009). An integrative definition of coaching effectiveness and expertise. *International Journal of Sports Science & Coaching*, 4(3), 307-323.
- Dilekçi, U. (2023). Spor lisesi öğrencilerinin liderlik özelliklerinin incelenmesi: İstanbul örneği. *Spor Eğitim Dergisi*, 7(3), 186-197.
- Dursun, M. (2025). The relationship between artificial intelligence attitudes and leadership orientations: A study on sport sciences students. *Turkish Journal of Sport and Exercise*, 27(3), 523-531.
- Dursun, M., Günay, M., & Yenel, İ. F. (2019). Çok yönlü liderlik yönelimleri ölçeği (ÇYLYÖ): Geçerlik ve güvenilirlik çalışması. *Uluslararası Yönetim Akademisi Dergisi*, 2(2), 333-347.
- Dursun, M., Tozoğlu, E., & Kan, E. (2024). Öğretmen adaylarının proaktif kişilik düzeyleri ile liderlik yönelimleri arasındaki ilişkinin incelenmesi. *Gazi Journal of Physical Education and Sport Sciences*, 29(4), 258-266.
- Edwards, C. B. (2008). *An investigation of the relationship between transformational leadership and organizational health* [Doktora tezi, Capella University]. ProQuest Dissertations and Theses Global.
- Garip, S. (2023). Sosyal bilimlerde nicel araştırma geleneği üzerine kuramsal bir inceleme. *International Journal of Social Science Research*, 12(1), 1-19.
- George, D., & Mallery, P. (2003). *SPSS for Windows step by step: A simple guide and reference. 11.0 update* (4. bs.). Allyn & Bacon.
- Gould, D., & Wright, E. M. (2012). The psychology of coaching. S. M. Murphy (Ed.), *The Oxford handbook of sport and performance psychology* içinde (s. 343). Oxford University Press.
- Gravetter, F. J., & Forzano, L. A. B. (2012). *Research methods for the behavioral sciences* (A. Rezaei, Çev., 3. bs.). Wadsworth Cengage Learning.
- Güler, B., Dursun, M., & Gunay, M. (2020). Spor lisesi öğrencilerinin liderlik yönelimlerinin incelenmesi. *Uluslararası Güncel Eğitim Araştırmaları Dergisi*, 6(2), 576-587.
- Gülüm, İ. V., & Dağ, İ. (2012). Tekrarlayıcı Düşünme Ölçeği ve Bilişsel Esneklik Envanterinin Türkçeye uyarlanması, geçerliliği ve güvenilirliği. *Anatolian Journal of Psychiatry*, 13(3), 216-223.
- Gümüşlüoğlu, L., & İlsev, A. (2009). Transformational leadership, creativity, and organizational innovation. *Journal of Business Research*, 62(4), 461-473.
- Gündoğdu, N. (2024). *Yönetim mi? Yöne-itim mi?* Gülnar Yayınları.
- Han, D. H., Park, H. W., Kee, B. S., Na, C., Na, D. H. E., & Zaichkowsky, L. (2011). Performance enhancement with low stress and anxiety modulated by cognitive flexibility. *Psychiatry Investigation*, 8(3), 221.
- Karasar, N. (2023). *Bilimsel araştırma yöntemi: Kavramlar, ilkeler, teknikler*. Nobel Yayın Dağıtım.
- Koçak, S. (2025). *Beden eğitimi ve oyun dersine giren sınıf öğretmenlerinin çok yönlü liderlik yönelimlerinin incelenmesi* [Yayımlanmamış yüksek lisans tezi]. Karamanoğlu Mehmetbey Üniversitesi.
- Malhotra, N. K. (2010). *Marketing research: An applied orientation* (6. bs.). Pearson Education.
- Martin, M. M., & Rubin, R. B. (1995). A new measure of cognitive flexibility. *Psychological Reports*, 76(2), 623-626.
- Northouse, P. G. (2025). *Leadership: Theory and practice*. Sage Publications.
- Öztürk, M. E., Tozoğlu, E., & Şebin, K. (2010). Farklı spor dallarında görev alan antrenörlerin liderlik özelliklerinin ve bu özelliklerinin yaş değişkeniyle ilişkileri. *Beden Eğitimi ve Spor Bilimleri Dergisi*, 7(4), 8-11.

Dursun, M. (2026). Bilişsel esneklik ile liderlik yönelimleri arasındaki ilişkinin ve demografik farklılıkların incelenmesi: üniversiteli sporcular üzerine bir araştırma. *Beden Eğitimi ve Spor Bilimleri Dergisi*, 20(1), 128-141.

Saraçoğlu, M., & Duman, S. (2023). Antrenörlerin liderlik yönelimleri ile sportmenlik davranışlarının incelenmesi. *Iğdır Üniversitesi Spor Bilimleri Dergisi*, 6(2), 56-63.

Stevens, A. D. (2009). Social problem-solving and cognitive flexibility: Relations to social skills and problem behavior of at-risk young children. *Seattle Pacific University*, 12(2), 152-175.

Sürücü, L., Maslakcı, A., & Şeşen, H. (2020, 28-29 Ekim). *Konaklama sektöründe dönüştürücü liderliğin yenilikçi iş davranışı üzerindeki etkisi* [Bildiri sunumu]. İşletme ve Yönetim Bilimleri Uluslararası Kongresi, İstanbul, Türkiye.

Tabak, A. (2001). Tarihsel gelişimi içerisinde liderlik tanımları ve liderlik kavramının günümüzdeki yeri. *Kara Harp Okulu Bilim Dergisi*, 6(2).

Tozoğlu, E., & Dursun, M. (2020). Spor bilimlerinde bilimsel araştırma süreci. Ö. Gökmen (Ed.), *Spor & bilim içinde* içinde (ss. 7-23). Efe Akademi Yayınları.

Yenel, İ. F. (2018). Liderlik. A. A. Yetim (Ed.), *Yönetim ve spor içinde*. Berikan Yayınları.

Yılmaz, B. H., Yetim, D., Özdemir, M., Üzer, Y., & Gül, E. (2024). Sporcularda ruminasyon ile bilişsel esneklik arasındaki ilişki. *Yalova Üniversitesi Spor Bilimleri Dergisi*, 3(1), 127-139.

Zong, J. G., Cao, X. Y., Cao, Y., Shi, Y. F., Wang, Y. N., Yan, C., ... Chan, R. C. (2010). Coping flexibility in college students with depressive symptoms. *Health and Quality of Life Outcomes*, 8(1), 66.