



Examination of the Relationship Between the Sources of Stress and The Mental Strength of Football Players

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Abstract

The purpose of this study was to investigate the relationship between the sources of stress and the mental strength of football players. The study sample consisted of football players who had participated in at least five matches during the 2021-2022 season of the regional amateur and professional leagues. In total, 1,040 players (702 amateurs and 338 professionals) voluntarily took part in the research. For data collection, the Football Coach–Athlete Stress Scale, the Football Media Stress Sources Scale, and the Mental Endurance Inventory in Sports were employed. The collected data were recorded and analyzed using the SPSS software package, and the significance level was set at 0.05. The mean age of the amateur football players participating in the study was 22.98±4.99 years, with a mean sports age of 10.91±4.19 years. The professional football players had a mean age of 25.87±5.17 years and a mean sports age of 14.51±3.87 years. A statistically significant difference was observed between the two groups in terms of both chronological age and sports age ($p<0.05$). In professional football players, significant relationships were identified between age and media stress in the dimension of result/score reflection, as well as between educational status and media stress in relation to result/score reflection and the sub-dimensions of mental toughness. In addition, a significant correlation was found between continuity and media stress in the context of negative content. Among amateur football players, significant associations were observed between sports age and media stress regarding negative content, and between marital status and media stress in the same dimension. Overall, the findings suggest that media stress is influenced by certain demographic and psychological variables in both amateur and professional athletes. As a result, the effective management of these and similar stress factors, which are believed to affect performance, may contribute positively to the psychological development and performance enhancement of football players.

Keywords: Football, stress, mental toughness.

Futbolcuların Stres Kaynakları ile Zihinsel Dayanıklılıkları Arasındaki İlişkilerin İncelenmesi

Özet

Bu çalışmanın amacı, futbolcularda stres kaynakları ile zihinsel dayanıklılıkları arasındaki ilişkiyi incelemektir. Çalışma örneklemini, 2021-2022 sezonunda bölgesel amatör ve profesyonel liglerde en az beş maça çıkmış futbolculardan oluşmaktadır. Araştırmaya toplamda 1.040 futbolcu (702 amatör ve 338 profesyonel) gönüllü olarak katılmıştır. Veri toplama aracı olarak Futbolcu Antrenör Stres Ölçeği, Futbol Medya Stres Kaynakları Ölçeği ve Sporda Zihinsel Dayanıklılık Envanteri kullanılmıştır. Toplanan veriler SPSS programında kaydedilmiş ve analiz edilmiştir. Anlamlılık düzeyi 0,05 olarak belirlenmiştir. Çalışmaya katılan amatör futbolcuların yaş ortalaması 22.98 ± 4.99 yıl, spor yaşı ortalaması ise 10.91 ± 4.19 yıldır. Profesyonel futbolcuların yaş ortalaması 25.87 ± 5.17 yıl, spor yaşı ortalaması ise 14.51 ± 3.87 yıldır. Her iki grup arasında hem kronolojik yaş hem de spor yaşı açısından istatistiksel olarak anlamlı fark bulunmuştur ($p < 0,05$). Profesyonel futbolcularda, yaş ile sonuç/skor yansıması boyutundaki medya stresi arasında ve eğitim durumu ile sonuç/skor yansıması ve zihinsel dayanıklılığın alt boyutlarıyla ilişkili medya stresi arasında anlamlı ilişkiler tespit edilmiştir. Ayrıca, süreklilik ile olumsuz içerikli medya stresi arasında anlamlı bir korelasyon bulunmuştur. Amatör futbolcularda ise, spor yaşı ile olumsuz içerikli medya stresi ve medeni durum ile aynı boyuttaki medya stresi arasında anlamlı ilişkiler gözlemlenmiştir. Genel olarak, bulgular medya stresinin hem amatör hem de profesyonel sporcularda bazı demografik ve psikolojik değişkenlerden etkilendiğini göstermektedir. Sonuç olarak, performansı etkilediği düşünülen bu ve benzeri stres faktörlerinin etkin bir şekilde yönetilmesi, futbolcuların psikolojik gelişimine ve performanslarının artırılmasına olumlu katkılar sağlayabilir.

Anahtar kelimeler: Futbol, stres ve zihinsel dayanıklılık.

Introduction

Football, which is considered the most popular sport in the world, continues to be played by women and men, children and adults with different levels of expertise (Stølen et al., 2015). Football is a three-dimensional visual art. Those who practice this art are football players, and those who design programs to develop the physical and aesthetic dimensions of this art are coaches. The football environment is a social phenomenon in which positive and negative changes continue to occur frequently and sequentially in terms of its dynamics (Kaplan, 2016).

For an athlete to be successful in sports, it will not be enough to be at a high level physically. In addition to the physical condition, the athlete's psychological infrastructure and capacity are also valuable. The failure of an athlete who is at excellent physical levels, but experiences psychological ups and downs is based on this (Erhan et al., 2015). It can be said that psychological performance indicators and mental toughness are also very important in football. Mental toughness is having a natural or developed limit that allows us to cope with branch-specific demands better than the opponent, to be more consistent and in a good position by being determined, focused, confident and under control under pressure (Günay et al., 2017; Jones et al., 2002).

Stress is not a situation that occurs without a reason. Stress is one of the most common situations that an individual encounter in their daily lives. For stress to occur, the individual must be affected by changes in the environmental conditions in which they live or have experienced emotional changes in their lives for different reasons. The ambition and anger that arise from stress can completely negatively affect the performance of the football player and the team (Eren, 2001; Günay et al., 2017).

For athletes to be successful in individual or team sports and to defeat their opponents, in addition to technical-tactical knowledge, physical preparation and endurance, psychological preparation and endurance are also important. The athlete's psychological endurance and the ability to use it can be important to determine the winner in cases where the competition conditions are equal (Weinberg and Gould, 2015). While some athletes among football players can be well prepared for possible stress factors, some can succumb to stress. Football players generally experience a stress situation that can be expressed as great depending on the importance of the match. There are some important factors that generally cause stress in football players. These factors can be expressed as fear of losing or getting injured, fear of being

benched, fear of failure, fear of being criticized, fatigue, having a yellow card from the previous match and the thought of getting a negative reaction from the audience (Günay et al., 2017).

When we look at the current understanding of sports in the world, it is seen that when training programs are planned in individual or team sports, they are prepared on scientific foundations and with the aim of a holistic development in the athlete. The contributions of training models that develop athletes psychologically as well as physically are of great importance for their development. Active participation by adopting training models suitable for their psychological development is an expected behaviour from athletes (Sheard, 2013). In this context, this study was conducted to examine the relationships between stress sources and mental resilience of football players.

Method

Research Model: This study was designed in accordance with the screening model. In research, screening models aim to describe an existing situation as it is. In the screening model, the subject of the research is tried to be described as it is (Karasar, 2005). From this point on, in this study, the research data were obtained using three separate scales and it is a descriptive situation analysis study that tries to describe the current situation and is applied with quantitative methods.

Universe-Sample (Research Group): This study was conducted in two separate universes consisting of amateur and professional players. Quota sampling was used as the sampling method. Quota sampling method is expressed as a method that allows the individual who will conduct the research to be limited according to the determined characteristics of the target community (Cohen et al., 2007). The universes of the research are limited to male athletes who are licensed in sports clubs in amateur and professional leagues in the 2021-2022 season and have played at least five matches. A total of 1040 football players participated in the study, including 702 amateur football players and 338 professional players who volunteered to participate in the study and from whom healthy data could be collected.

Data Collection Tools: In order to determine the demographic information of the participating football players—such as age, category, league, position, and sports experience—a “Personal Information Form” was developed. To measure the players’ sources of stress, the “Coach-Athlete Stress Sources Questionnaire in Football,” adapted into Turkish by Yıldız and Polat (2020), and the “Media Stress Sources in Football Questionnaire” were used. To assess their

mental toughness, the “Sports Mental Toughness Inventory,” adapted into Turkish by Altıntaş and Bayar Koruç (2016) was utilized.

Coach-Athlete Stress Sources Questionnaire in Football: This measurement tool was developed by Kristiansen et al., (2012) to identify sources of stress between coaches and athletes in football, and it was adapted into Turkish by Yıldız and Polat (2020). The scale consists of seven items and a single sub-dimension. It is a five-point Likert-type scale (1: strongly disagree; 5: strongly agree). The reliability analysis revealed a Cronbach’s alpha value of 0.83 (Yıldız and Polat, 2020).

Media Stress Sources in Football Questionnaire: This measurement tool was developed by Kristiansen et al., (2012) to assess media-related sources of stress in football settings and was adapted into Turkish by Yıldız and Polat (2020). The scale consists of six items and two sub-dimensions: *Media Stress – Outcome/Score Reflection* and *Media Stress – Negative Content*. It is a five-point Likert-type scale (1: strongly disagree; 5: strongly agree). According to the reliability analysis, the Cronbach’s alpha value was found to be 0.75 for the *Outcome/Score Reflection* sub-dimension and 0.60 for the *Negative Content* sub-dimension. The overall reliability coefficient of the scale was determined to be 0.74 (Yıldız and Polat, 2020).

Sports Mental Toughness Inventory: The *Sports Mental Toughness Inventory*, developed by Sheard et al. (2009) to assess levels of mental toughness in sports environments, was adapted into Turkish by Altıntaş and Bayar Koruç in 2016. This 14-item inventory is a valid and reliable tool used to evaluate the mental toughness of Turkish athletes. In addition to providing an overall mental toughness score, it includes three sub-dimensions: *Confidence*, *Constancy*, and *Control*. The inventory uses a four-point Likert scale (1: Completely False; 4: Completely True) (Sheard et al., 2009). Descriptions of the Three Sub-Dimensions in the Sports Mental Toughness Inventory: The three sub-dimensions included in the *Sports Mental Toughness Inventory* are described below (Sheard, 2013):

- **Confidence:** Belief in one’s abilities to achieve goals in challenging situations and the perception of being superior to opponents (Items 1, 5, 6, 11, 13, 14).
- **Control:** The ability to remain calm, composed, and in control under pressure or in unexpected situations (Items 2, 4, 7, 9).

- **Constancy:** Taking responsibility, maintaining concentration, and persisting in line with set goals (Items 3, 8, 10, 12) (Altıntaş and Bayar Koruç, 2016).

Data Collection Process: After obtaining ethical approval for the study, the survey technique—one of the descriptive research methods—was used to collect data from amateur and professional football players. The survey forms were distributed online and completed voluntarily by the athletes. The data collection process lasted approximately two months, and the research data were collected during the 2021–2022 football season, specifically between May 1, 2022, and June 30, 2022, through the voluntary participation of the athletes.

During the current research, the "Higher Education Institutions Scientific Research and Publication Ethics Directive" was followed.

Statistical Analysis: The collected data were first recorded using the licensed SPSS software (version 18.0). The normality of data distribution was assessed using the Kolmogorov-Smirnov test. For data that showed a normal distribution, *t*-tests and ANOVA were used to compare different groups, while Pearson correlation tests were employed to examine relationships between variables. The level of significance was set at 0.05.

Ethical Approval: Prior to the commencement of the study, ethical approval was obtained from the Muğla Sıtkı Koçman University Medical and Health Sciences Ethics Committee – 2 (Sports, Health) with the decision dated April 26, 2022, and numbered 52.

FINDINGS

Table 1. Comparison of Professional and Amateur Football Players Participating in the Study According to Age and Sports Experience Variables

Variables	Status	N	$\bar{X}$	S	<i>t</i>	p
Age (year)	Amateur	702	22.98	4.99	-8.635	0.000*
	Professional	338	25.87	5.17		
	Total	1040	23.92	5.23		
Sports Age (year)	Amateur	702	10.91	4.19	-13.326	0.000*
	Professional	338	14.51	3.87		
	Total	1040	12.08	4.42		

*p<0.05

The average age of the amateur football players participating in the study was determined as 22.98±4.99 years and their sports age as 10.91±4.19 years, while the average age

of the professional football players was determined as 25.87 ± 5.17 years and their sports age as 14.51 ± 3.87 years. In the professional and amateur football players participating in the study were compared in terms of age and sports age variables, a significant difference was found between the two football groups in both age and sports age ($p < 0.05$).

Table 2. Comparison of stress sources and mental resilience of professional and amateur football players participating in the study.

Variables	Status	N	$\bar{X}$	S	<i>t</i>	p
Trust	Amateur	702	3.12	.39	1.349	.178
	Professional	338	3.08	.38		
Control	Amateur	702	2.65	.53	1.626	.104
	Professional	338	2.59	.49		
Continuity	Amateur	702	2.56	.27	.947	.486
	Professional	338	2.55	.30		
Sources of Stress	Amateur	702	3.71	.72	.163	.871
	Professional	338	3.70	.68		
Media Stress: Result/Score	Amateur	702	3.38	.62	.018	.985
Reflection	Professional	338	3.38	.65		
Media Stress: Negative	Amateur	702	2.61	.90	-1.529	.127
Content	Professional	338	2.70	.88		

* $p < 0.05$

When the stress sources and mental endurance levels of professional and amateur football players participating in the study were compared, no significant difference was found between the two football player groups in terms of stress sources and mental endurance levels in football ($p > 0.05$).

Table 3. Relationships between some variables and stress sources and mental resilience levels in professional football players participating in the study.

Variables		Age	1	2	3	4	5	6	7	8
Sports Age (1)	p	.679								
	r	.000								
	N	338								
Education Status (2)	p	.235	-.061							
	r	.000	.260							
	N	338	338							
Marital status (3)	p	.526	.423	.197						
	r	.000	.000	.000						
	N	338	338	338						
Trust (4)	p	.007	.000	-.010	.033					
	r	.903	.996	.862	.541					
	N	338	338	338	338					
Control (5)	p	.092	.057	.007	.003	-.173				
	r	.090	.298	.893	.956	.001				
	N	338	338	338	338	338				
Continuity (6)	p	-.027	-.037	-.089	-.037	.040	.238			
	r	.625	.497	.101	.496	.468	.000			
	N	338	338	338	338	338	338			
Sources of Stress (7)	p	-.006	-.041	.122	.031	.057	-.105	-.084		
	r	.905	.449	.025	.565	.299	.054	.123		
	N	338	338	338	338	338	338	338		
Media Stress: Result/Score Reflection (8)	p	.132	.065	.022	.049	.054	-.031	-.019	.447	
	r	.015*	.234	.690	.366	.324	.568	.732	.000	
	N	338	338	338	338	338	338	338	338	
Media Stress: Negative Content (9)	p	.080	.064	.012	.046	-.071	.018	.138	-.072	.209
	r	.141	.239	.829	.402	.193	.743	.011	.187	.000
	N	338	338	338	338	338	338	338	338	338

*p<0.05

When the relationships between some variables and stress sources and mental endurance levels were examined in professional football players participating in the study, significant relationships were found between age and media stress: result/score reflection, between educational status and media stress: result/score reflection, and between continuity and media stress: negative content, which are sub-dimensions of mental endurance.

Table 4. Relationships between stress sources and mental resilience levels of amateur football players participating in the study

Variables		Age	1	2	3	4	5	6	7	8
Sports Age (1)	p	.685								
	r	.000								
	N	702								
Education Status (2)	p	.157	.188							
	r	.000	.000							
	N	702	702							
Marital status (3)	p	.605	.321	-.079						
	r	.000	.000	.037						
	N	702	702	702						
Trust (4)	p	.005	.019	.045	-.035					
	r	.900	.612	.229	.356					
	N	702	702	702	702					
Control (5)	p	.004	.014	.024	-.038	-.123				
	r	.907	.720	.518	.313	.001				
	N	702	702	702	702	702				
Continuity (6)	p	.037	.004	-.051	.032	.099	.160			
	r	.334	.926	.181	.392	.009	.000			
	N	702	702	702	702	702	702			
Sources of Stress (7)	p	.049	.027	-.010	.011	-.017	.051	.010		
	r	.196	.469	.799	.762	.647	.173	.787		
	N	702	702	702	702	702	702	702		
Media Stress: Result/Score Reflection (8)	p	.030	.048	.042	.018	.041	.036	-.013	.337	
	r	.431	.204	.263	.634	.275	.344	.733	.000	
	N	702	702	702	702	702	702	702	702	
Media Stress: Negative Content (9)	p	.030	.090	-.034	.096	.031	-.034	.006	-.165	.068
	r	.432	.017	.375	.011	.419	.368	.877	.000	.072
	N	702	702	702	702	702	702	702	702	702

*p<0.05

When the relationships between some variables and stress sources and mental endurance levels were examined in amateur football players participating in the study, significant relationships were found between sports age and media stress: negative content, and between marital status and media stress: negative content.

Discussion and Conclusion

There are many factors that affect the performance of athletes in football. In this study, the relationships between the stress sources that are thought to contribute to the sports performance of football players to a certain extent and their mental endurance were examined. According to the findings of the study, no significant difference was found between the stress sources and mental resilience levels of amateur and professional football players participating in the study. In professional football players, there were significant relationships between age and media stress: result/score reflection, between educational status and media stress: result/score reflection, and between mental toughness sub-dimensions of continuity and media stress: negative content, while in amateur football players, there were significant relationships between age in sports and media stress: negative content, and between marital status and media stress: negative content.

In the study conducted by Parlak (2023) examining mental endurance in amateur football players, when the mental endurance variable was evaluated in terms of sports history, it was determined that the scores of individuals with 6-7 years of sports history were higher than the scores of individuals with 10 years or more of sports history. According to the results of the same study, the mental endurance levels of athletes do not differ in terms of positions.

In a study conducted by Güvendi et al. (2018), it was found that while there was a significant difference in the continuity dimension of mental toughness in terms of sports age in favor of those with a sports history of 1-5 years, the scores of athletes with a sports age of 5 years and above were higher than those with a sports age of 6-10 years. In a study conducted by Yazıcı et al. (2021) on young football players, it was determined that while there was no significant difference in terms of mental endurance in terms of sports age and position of the athletes, the level of emotionality changed positively as the sports age increased.

In their study examining mental endurance on Konya amateur league football players, Uçar and Kaplan (2020) found that the mental endurance levels of football players did not differ in terms of age, marital status, position and sport age variables. In the study conducted by Şahinler and Ersoy (2019) in which they examined the mental endurance of athletes in Kütahya in terms of different variables, it was determined that there were significant relationships in the mental endurance averages of the athletes according to their sports age and general emotional state.

In the study conducted by Kurtay, (2018) examining the mental endurance of football players, no significant difference was found in the general averages of mental endurance according to both the position variable and the sport age variable. In a study conducted by Ünver and Karacabey (2022) on football players, it was determined that increasing the physical endurance levels of football players positively affects their mental endurance. According to Bozkurt (2010), in order to increase athletic performance to the desired levels and enhance performance, it is necessary to first see and understand the elements that are effective in the formation of athletic performance. In the study conducted by Gledhill, Harwood, and Forsdyke (2017) on football players, it is mentioned that psychosocial factors are positively related to the performance of football players.

In a study comparing the stress levels of athletes in different branches of sports, Sözen et al., (2012) found that the stress levels of athletes in football, volleyball and basketball showed similar results and there was no difference between them. In a study conducted by Metin et al., (2023) on football players playing in the Muğla super amateur league, it was found that the stress perception and psychological resilience levels of amateur football players differed in terms of some variables, and although the stress scores of defenders were higher than those of players playing in other positions according to the position variable, there was no significant difference.

Psychology in contemporary professional football is an area that is receiving more attention both in the applied environment of football teams and in the research literature (Ivarsson et al, 2020). There is a relationship between stress and revitalization in sports. If the revitalization in the athlete increases more than necessary, stress and anxiety can be mentioned there. In sports psychology, and therefore in sports and therefore in football, two types of stress can be mentioned. Situational stress, characteristic anxiety. There are methods to cope with stress. These methods are self-confidence, paying attention to the competition, getting in the mood, being motivated, doing mental training and most importantly being ready for the competition both concretely and abstractly (Arslanoğlu, 2005). Thompson et al. (2019) highlight the importance of mental fatigue in their study on mental fatigue in football, highlighting the need for mentally taxing tasks that adequately represent football-related mental fatigue and mental fatigue assessments that minimize the confounding effect of response bias.

Based on the findings of the study, significant relationships were found between age and media stress: result/score reflection, between educational status and media stress: result/score

reflection, and between continuity and media stress: negative content, which are sub-dimensions of mental toughness, in professional football players. In amateur football players, significant relationships were found between sports age and media stress: negative content, and between marital status and media stress: negative content.

As a result, while there is no difference in the stress sources and mental endurance levels of amateur and professional football players, it is thought that media stress is affected by some variables in both amateur and professional athletes, and that managing these and similar situations in terms of psychological characteristics, which are considered to be one of the factors affecting performance, will contribute to the development of athletes.

Information on Ethics Committee Permission

Committee Name: Muğla Sıtkı Koçman University Medical and Health Sciences Ethics Committee – 2 (Sports, Health)

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Declaration of Contribution of Researchers: Ö.Ö. 60%, K.G. 40%. All authors have read and approved the final version of the article

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REFERENCES

- Altıntaş, A., and Bayar Koruç, P. (2016). Examining Psychometric Properties of The Sport Mental Toughness Questionnaire-SMTQ. *Journal of Sports Sciences*, 27(4), 163-171. <https://doi.org/10.17644/sbd.311985>
- Bozkurt, S. (2010). Psychological Perspective on Sports Performance. *Celal Bayar University Journal of Physical Education and Sports Sciences*, 5(1), 28-37. <https://dergipark.org.tr/tr/pub/cbubesbd/issue/32230/357794>
- Cohen, L., Manion, L., & Morrison, K. (2007) *Research Methods in Education*. 6th Edition, Routledge, Taylor & Francis e-Library. <http://dx.doi.org/10.4324/9780203224342>
- Eren, E. (2001). *Organizational Behavior and Management Psychology*. Istanbul: Beta Publications.
- Erhan, S., Bedir, D., Güler, M., & Ağduman, F. (2015). Validity and reliability study of the Turkish version of the scale for evaluating athletes' psychological skills. *Ataturk University Journal of Physical Education and Sports Sciences*, 17(1), 59-71. <https://dergipark.org.tr/tr/pub/ataunibesyo/issue/43762/537305>
- Gledhill, A., Harwood, C., & Forsdyke, D. (2017). Psychosocial factors associated with talent development in football: A systematic review. *Psychology of Sport and Exercise*, 31, 93-112. DOI: 10.1016/j.psychsport.2017.04.002
- Günay, M., Yüce, A., & Ocak, Y. (2017). Scientific Fundamentals of Football-Futsal Training. Ankara: Batman Belediyespor Culture Education and Sports Publications.

- Güvendi, B., Türksoy, A., Güçlü, M., & Konter, E. (2018). Examining the courage levels and mental toughness of professional wrestlers. *International Journal of Sport Exercise and Training Sciences - IJSETS*, 4(2), 70-78. DOI: 10.18826/usecabd.424017
- Ivarsson, A., Kilhage-Persson, A., Martindale, R., Priestley, D., Huijgen, B., Arden, C., & McCall, A. (2020). Psychological factors and future performance of football players: A systematic review with meta-analysis. *Journal of Science and Medicine in Sport*, 23(4), 415-420. DOI: 10.1016/j.jsams.2019.10.021
- Jones, G., Hanton, S., & Connaughton, D. (2002). What Is This Thing Called Mental Toughness? An Investigation of Elite Sport Performers. *Journal of Applied Sport Psychology*, 14, 205-218. DOI: 10.1080/10413200290103509
- Kaplan, T. (2016). *Conceptual Dimensions in Football Coach Education*. Konya: Palet Publications.
- Karasar, N. (2005). *Scientific research method*. Ankara: Nobel Publishing Distribution.
- Kristiansen, E., Halvari, H., & Roberts, G.C. (2012). Organizational and media stress among professional football players: testing an achievement goal theory model. *Scandinavian journal of medicine & science in sports*, 22(4), 569-579. DOI: 10.1111/j.1600-0838.2010.01259.x.
- Kurtay, M. (2018). *Investigation of mental toughness levels of football players playing in development leagues (Unpublished Master's Thesis)*. Akdeniz University Health Sciences Institute, Movement and Training Department, Antalya.
- Metin, S.C., Safi, Z., ve Uçar, İ.A. (2023). Investigation of the relationship between stress perception, psychological resilience and quality of life in football players (Muğla super amateur league example) *ROL Journal of Sports Sciences*, 4(1), 321-335. <https://www.roljournal.com/index.php/rol/article/view/140/101>
- Parlak, N. (2023). Investigation of the Effect of Mental Training on Mental Endurance in Amateur Football Players. *Adnan Menderes University Social Sciences Institute Journal*, 10(1), 83-100. DOI: 10.30803/adusobed.1233266
- Sheard, M., Golby, J., & Van Wersch, A. (2009). Progress towards construct validation of the Sports Mental Toughness Questionnaire (SMTQ). *European Journal of Psychological Assessment*, 25(3), 186-193. DOI: 10.1027/1015-5759.25.3.186
- Sheard, M. (2013). *Mental Toughness: The Mindset Behind Sporting Achievement*. Second Edition, Hove, East Sussex: Routledge.
- Sözen, H., Doğan, E., ve Erdoğan, E. (2012). Comparison of stress levels and problem solving skills of athletes in different branches. *Kafkas University Social Sciences Institute Journal*, 1(9), 97-110. <https://dergipark.org.tr/tr/pub/sbedergi/issue/11258/134542>
- Stølen, T., Chamari, K., Castagna, C., & Wisløff, U. (2005). *Physiology of soccer: an update*. *Sports Med.* 35(6): 501-536. DOI: 10.2165/00007256-200535060-00004.
- Şahinler, Y., and Ersoy, A. (2019). Examining the mental endurance of athletes according to different variables. *International Journal of Social Sciences and Education Research*, 5(2), 168-177. DOI: 10.24289/ijsser.558658
- Thompson, C.J, Fransen, J., Skorski, S., Smith, M.R., Meyer, T., Barrett, S., & Coutts, A.J. (2019). Mental Fatigue in Football: Is it Time to Shift the Goalposts? An Evaluation of the Current Methodology. *Sports Med.*, 49(2), 177-183. DOI: 10.1007/s40279-018-1016-z
- Uçar, U., and Kaplan, T. (2020). Examining mental toughness in Konya amateur league football players. *Journal of Physical Education and Sports Sciences*, 14(2), 145-157. Access address: <https://dergipark.org.tr/tr/pub/bsd/issue/56097/710872>

Ünver, D., and Karacabey, K. (2022). Physiological and Mental Endurance in Football: An Application on Professional Football Players. *International Turkish Journal of Sports and Exercise Psychology*, 2(2), 73-87. DOI:10.55376/ijtsep.1226091.

Weinberg, R.S., and Gould, D. (2015). *Foundations of Sport and Exercise Psychology*. Champaign, IL: Human Kinetics Publishers.

Yazıcı, A., Yapar, A., Güven, Ş., Taşcıoğlu, R., & Ulutaş, İ (2021). Comparison of Emotional Intelligence and Mental Toughness of Youth Soccer Players in Terms of Position and Soccer Experience Variables. *Gazi Journal of Physical Education and Sports Sciences*, 26(3), 407-418. DOI: 10.53434/gbesbd.938664

Yıldız, K., and Polat, E. (2020). The Validity and Reliability Study of the Coach-Athlete Stress Stressors Scale in Football and Media Stress Stressors Scale in Football for the Turkish Population. *SPORMETRE Journal of Physical Education and Sports Sciences*, 18(3), 146-156. DOI: 10.33689/spormetre.736068

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