

Effect of Psychological Fragility on Motivation in Sports

Yunus Emre BÜYÜKBASMACI ^{1A}, Murat ERDOĞDU ^{2B}, Enes Buğra ÖZ ^{3C}

¹ Karamanoğlu Mehmet bey University, School of Applied Sciences, Department of Recreation Management, Karaman, TÜRKİYE

² Selcuk University, Faculty of Sport Sciences, Department of Sport Management, Konya, TÜRKİYE

³ Akdeniz University, Faculty of Sport Sciences, Institute of Social Sciences, Antalya, TÜRKİYE

Address Correspondence to Yunus Emre BÜYÜKBASMACI: e-mail: emrebasmaci70@gmail.com

Conflicts of Interest: The author(s) has no conflict of interest to declare.

Copyright & License: Authors publishing with the journal retain the copyright to their work licensed under the CC BY-NC 4.0.

Ethical Statement: It is declared that scientific and ethical principles have been followed while carrying out and writing this study and that all the sources used have been properly cited.

(Date Of Received): 07.12.2023 (Date of Acceptance): 11.06.2024 (Date of Publication): 31.08.2024

A: Orcid ID: 0000-0003-1090-3273 B: Orcid ID: 0000-0002-5324-2236 C: 0000-0002-3369-7751

Abstract

The aim of this study is to analysis the effect of psychological fragility on motivation in sports. The "Psychological Fragility Scale" and the "Motivation in Sports Scale-II" were used as data collection tools in the study. The "Psychological Fragility Scale" was developed by Sinclair and Wallston (32), and adapted to Turkish by Akın and Eker (2). The "Motivation Scale in Sports-II" is based on Pelletier et al. (27), developed by, It was adapted into Turkish by Yıldız et al.(38). The samples of the study were determined by using the "Objective (Monographic) and Theoretical Sample Selection Technique", one of the non-probability (judicial) sample selection techniques. Scales were performed by giving the necessary time to the athletes accompanied by a trainer before training. A total of 216 athletes were participated in the research. SPSS package programs were used in the analysis of the obtained data. Normality test was performed in order to test the hypotheses established before the study, descriptive statistical analysis, correlation analysis and regression analysis were performed respectively. At the end of the study, a moderate of negative relationship (-,60) was determined between the level of psychological decrepitude and the level of motivation in sports. It has been found that as athletes' psychological fragility perception scores increase, there is a decrease in motivation skills scores in sports.

Keywords: Sports, athletes, psychological fragility, motivation in sports.

Psikolojik Kırılganlığın Sporda Güdülenmeye Etkisi

Özet

Bu çalışmanın amacı, psikolojik kırılganlığın sporda güdülenmeye etkisini yordamaktır. Çalışmada veri toplama aracı olarak, "Psikolojik Kırılganlık Ölçeği" ile "Sporda Güdülenme Ölçeği-II" kullanılmıştır. "Psikolojik Kırılganlık Ölçeği" Sinclair ve Wallston (1999), tarafından geliştirilmiş Akın ve Eker (2011), tarafından Türkçe'ye uyarlanmıştır. "Sporda Güdülenme Ölçeği-II" ise Pelletier ve ark. (2013), tarafından geliştirilmiş, Yıldız ve arkadaşları (2019), tarafından Türkçe'ye uyarlanmıştır. Çalışmanın örneklemi, olasılıkdışı (yargısal) örneklem seçim tekniklerinden "Amaçsal (Monografik) ve Teorik Örneklem Seçim Tekniği" kullanılarak belirlenmiştir. Ölçekler sporculara antrenman öncesi antrenör eşliğinde gerekli süreler tanınarak gerçekleştirilmiştir. Araştırmada toplam 216 sporcu yer almıştır. Elde edilen verilerin analizinde SPSS programından yararlanılmıştır. Çalışma öncesinde kurulan hipotezleri test etmek amacıyla il olarak normallik testi gerçekleştirilmiştir. Normallik testi sonrasında sırasıyla tanımlayıcı istatistik analizi, korelasyon analizi ve regresyon analizi gerçekleştirilmiştir. Araştırmanın sonunda, psikolojik kırılganlık düzeyi ile sporda güdülenme düzeyi arasında olumsuz yönde çok yüksek düzeyde (-,989) bir ilişki belirlenmiştir. Sporcuların psikolojik kırılganlık algı puanları yükseldikçe, sporda güdülenme becerileri puanlarında bir azalma olduğu tespit edilmiştir.

Anahtar Kelimeler: Spor, sporcu, psikolojik kırılganlık, sporda güdülenme.

INTRODUCTION

The act of being offended has been expressed by the Turkish Language Institution as “getting offended, offended, hurt against someone” (1). Psychological fragility, on the other hand, is defined as psychological frustration behaviors that occur in individuals who are in search of success with external approval. Psychological fragility reveals a sense of fragility to the capricious behavior of other people or the difficulties of life (7). This situation can cause negativity in a person's social life and against their goals. In addition, psychological fragility can also negatively affect people's subjective well-being by lowering their hope and excitement levels (30). Factors that cause psychological fragility include stressful events, life experiences, social status, social environment structure, age, gender, marital status, socio-economic status, traumatic experiences, family structure, etc. (23; 35; 36). If Summarized; psychological fragility is considered as a natural consequence of being human (39).

We can define why individuals do sports despite the risk of injury and injury by the phenomenon of motivation in sports (10). Motivation in sports, which is one of the most important building blocks of sporting success, is influenced by the nature of sports, sports branch and at the same time athlete personality traits. At the same time, athletes who receive support from their social environment are advantageous in terms of motivation. On the other hand, individuals who do not have problems with motivation in sports try to reveal their performance in the best way by enjoying sports (19). In addition, the sense of motivation gives the athlete readiness behavior. While some athletes see training as a very enjoyable tool, some athletes see it as a boring and challenging process. The factors that cause these two different motivations are due to the direction, stability and intensity of motivation (34). Some researchers have considered the phenomenon of motivation in sports with three different concepts in their studies: participant-centered, situation-centered and interactional-centered view (4). If the personality structure, needs and goals of the athlete and his coach contain a participant-centered view, the situation the athlete is in, a situational view, both a participatory and a situational view, it is expressed as an interactionist view (4,5; 37).

Psychological fragility drags athletes to the center of obscurity, while motivation in sports is a harbinger of success. Do individuals who experience psychological fragility have problems with motivation in sports? What kind of difficulties do individuals experiencing psychological fragility experience in terms of motivation in sports? What are the solutions to psychological fragility and motivation problems in sports? This study was conducted to look for answers to similar questions. In this athlete-centered study, psychological fragility and motivation issues in sports were analyzed by synthesizing them into sports.

Psychological Fragility

Psychological fragility refers to the cognitions that occur as a result of external approval and success seeking (32). The search for external approval with the meanings attached to success can make people take on a more fragile structure than individuals without expectations. In this context, it is stated that the psychological fragility levels of individuals who need environmental approval to a high degree will be higher (30). It is stated that the phenomenon of psychological fragility can be affected by social structures (29). Human beings have felt the need for approval from their surroundings throughout life. While this behavior is positive when approved by their environment, it can cause psychological fragility by affecting the intellectual strength of individuals when it is not approved (17). In individuals who experience psychological fragility, situations of isolation from life and self-blame occur (3). Sinclair and Wallston (32) stated that psychological fragility may be affected by shame, addiction, cognitive patterns, perfectionism and dysfunctionality along with genetic factors. It is accepted that the changes that may occur in self-esteem affect the level of psychological fragility. While an individual who has lost his self-esteem becomes sensitive to the negative situations he faces, it also leads to an increase in the level of psychological fragility. On the contrary, in the opposite cases, the cognitive perceptions of individuals with high self-esteem are well-structured and the level of fragility is quite low (9).

Motivation in Sports

The concept of motivation is included among the basic elements of exercise and sports psychology. It has a very important position in achieving the success of sports actions. Motivation in sports is the first degree factor in behaviors such as setting any sports goal, taking action for the goal, ensuring the continuation of movement or terminating movement (18). The process of transformation of motivation into behavior is shown in figure 1. (6).



Figure 1. Transformation of Motivation into Behavior

It is a matter of noble importance for athletes to gain a sense of motivation and behavior in order to be successful. The reason is that athletes who do not experience enough motivational behavior can be met with a reaction by their viewers, social environment and internal emotional states. The state of achieving success in sports never happens without motivation(Doğan, 2022).. Motivation and success are a common concept in interaction with each other. For this reason, the motivation levels of athletes have become the criterion of sporting success. In summary; athletes who cannot be motivated, who cannot focus, who cannot motivate themselves should not be expected to show success (22).

METHOD

The research is a study in relational survey model to examine how much perceived fragility perception variable predict motivation in sport levels in athletes. The method of this study is a "relational model" study prepared using the "questionnaire" technique, one of the quantitative research methods.

Model of the Research

In this section, the model diagram of the research is given.

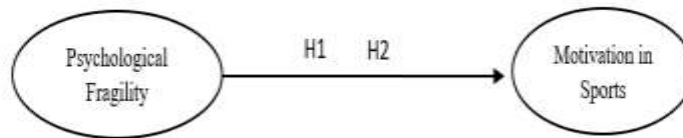


Figure 2. Model of the Research

Hypotheses of the Research

1. **H⁰**: There is no significant relationship between the level of " Psychological Fragility" and the perceptions of "motivation in sports".

1. **H¹**: There is a significant relationship between the level of " Psychological Fragility" and the perceptions of "motivation in sports".

2. **H⁰**: The level of "psychological vulnerability" has no effect on the perception of "motivation in sports".

2. **H¹**: The level of "psychological vulnerability" has an effect on the perception of "motivation in sports".

Problem Sentences and Subproblems of the Research

1: Does the level of "psychological vulnerability" have an impact on the perception of "motivation in sports"?

1.1; Is there a positive effect of the level of "psychological vulnerability" in sports on the perception of "motivation in sports"?

Universe and Sampling

The universe of this study consists of amateur age group athletes from Istanbul province. The sample is composed of Bakırköyspor, İfaspör, Bahçelievlerspor athletes determined by the "Objective (Monographic) and Theoretical Sample Selection Technique".

Data Collection Tools

This study was prepared by using the "Psychological Fragility Scale" and the "Motivation in Sports Scale-II".

Psychological Fragility Scale

The "Psychological Fragility Scale" was developed by Sinclair and Wallston (32). Its adaptation into Turkish was carried out by Akın and Eker (2). The scale consists of one dimension and 6 questions. The scale is of 5-point Likert type. The cronbach alpha reliability coefficient of the scale was determined as 0.75.

Scale of Motivation in Sports-II

The Motivation Scale in Sports-II was developed by Pelletier et al. (27). The adaptation study into Turkish was implemented by Öcal and Sakallı (25). The scale is of 7-point likert type. Scale consists of 18 questions. The 6 sub-dimensions of the scale are identity, internal motivation, assimilation, inward impulse, external regulation, lack of motivation. Cronbach alpha "coefficient" of the scale was determined as 0.82.

Statistical Analysis

In the analysis of the data, descriptive statistical methods frequency (n), percentage (%), arithmetic mean (X) and standard deviation (SD) were used for personal information. In the study, first of all, the normality and linearity of the data sets were evaluated to determine whether the data were suitable for simple linear regression analysis. The existence of extreme values that make normality (multivariate) and linearity assumptions difficult was examined according to mahalanobis distance (13.82) and cook's (Cook' <1) values. In addition, the kurtosis, skewness values, scatter and histogram graphs of the data sets were also examined. In addition to meeting the linearity and normality conditions of the data sets, it was seen that the sample size was sufficient considering the number of predicting variables. For the condition that there is no high correlation coefficient between the predictor variables, which is another assumption of the simple linear regression analysis, the binary correlation coefficients between the predictor variables, VIF and CI values were examined.

It was determined that there was no correlation value above .80, which can be defined as multicollinearity among the predictive variables, the VIF value was less than 10 and the CI value was less than 30. Finally, the Durbin-Watson value was checked to examine the condition of errors being independent; It has been seen that the value is between 1-3 .

Working Group

The study group of this study consisted of a total of 216 athletes, including 68 Bakırköyspor U15/A, U16, U17/B, U18, U-17/A athletes, 89 Bahçelievlerspor U13, U14, U15/B, U16 athlete, 59 İfaspör U14 T.Ş. Grup, U17/A, U18, athletes in the football branch. The surveys were conducted by allowing the athletes of all three sports clubs the necessary time before training accompanied by a coach. The study sample was limited to Bakırköyspor, Bahçelievlerspor, İfaspör athletes as a result of the limitations of the study. Since the sample filling out the questionnaires randomly could not be determined, all data were assumed to be correct answers. In order to solve the hypotheses established before the study, 2 different scale questions were posed to the samples.

FINDINGS

Table 1. Normality test findings

Psychological Fragility	Skewness	836	,168
	Kurtosis	-1,137	,334
Motivation in Sports	Skewness	-,183	,122
	Kurtosis	-1,357	,334

Normality analysis was performed before the analyses were performed between the scales. It was assumed that the variables with skewness and kurtosis values between -2 and +2 showed normal distribution (16). Accordingly, it was found that the values of Psychological Fragility and Motivation in Sports showed a normal distribution, and it was decided to use the parametric test method in the analysis of the data.

Table 2. Descriptive statistical findings

	N	Mean	Std. Deviation
Psychological Fragility	216	23,314	3,69058
Motivation in Sports	216	30,158	8,21511

In Table 2, when the descriptive statistical findings showing the perceptions of psychological fragility and motivation in sports were examined, psychological fragility ($x=23.314\pm3.690$) was determined as ($x=30,158\pm8,215$) motivation in sports.

Table 3. Correlation Analysis Showing the Relationship Between Psychological Fragility and Perceptions of Motivation In Sports

Psychological Fragility	Motivation in Sports	
	Pearson Correlation	-,608**
P	,000	

In Table 3, as a result of the correlation analysis, a negative, at a moderate level relationship was determined between psychological fragility and perceptions of motivation in sports.

Table 4. Regression analysis between psychological fragility and perceptions of motivation in sports

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	
1	,608a	,369	,366	2,187	
Anova					
Model	Sum of Squares	df	Mean Square	F	P
1 Regression	599,384	1	599,384	125,250	,000b
Residual	1024,024	214	4,786		
Coefficients					
Model	Unstandardized Coefficients	Standardized Coefficients		t	P
	B	Std. Error	Beta		
1 (Constant)	-25.778	,859		-30,026	,000
Psychological Fragility	1,121	,100	,608	11,192	,000

In Table 4, as a result of the regression analysis, a statistically significant predictable was found between psychological fragility and perceptions of motivation in sports.

DISCUSSION AND CONCLUSION

When descriptive statistical findings showing the psychological fragility and motivation perceptions of the athletes in the study were examined, psychological fragility ($x=23,314\pm3,690$) and motivation in sports ($x=30,158\pm8,215$) were determined as.

As a result of the correlation analysis performed, a moderate of negative relationship was determined between psychological vulnerability and perceptions of motivation in sports. As the psychological vulnerability levels of athletes increase, the motivation levels in sports decrease. Psychological vulnerability can be expressed as a state of sadness, unhappiness and pessimism, inability to enjoy events and phenomena in social life, and mental depression, which has become permanent in a way similar to depression. Motivation in sports, on the other hand, evokes empowerment. Given the meaning of the concept of psychological vulnerability, it is not surprising that there is a negative relationship between motivation and psychological vulnerability in sports, which evokes empowerment in sports. Because while psychological fragility drags athletes to the center of obscurity, motivation in sports is a harbinger of success.

When the literature was examined; Kasil's (20) study examined the relationship between burnout perceptions and sport-specific success motivation perceptions in athletes who received curling and skiing training, and a significant negative relationship was observed between athletes' burnout levels and sport-specific success motivations. While psychological vulnerability and burnout perceptions show similarities to each other, sport motivation perceptions and sport-specific success motivation perceptions show similarities. From this point of view, Kasil's (20) study also supports our study. In Demirci's (12) study conducted to compare the levels of motivation and depression perception of students who continue their education and training life at the faculty of sports sciences and the faculty of education, the results of a meaningful low-level relationship between motivation and depression levels were obtained. Özden's (26), a similar study, examined the relationship between academic motivation and depression levels of students receiving online education in his study, and observed a negative, moderate and significant relationship between depression and academic motivation variables. In Karharman's (2019) study, the effect of positive perception levels of elite mountain running athletes on success motivation was examined, and a positively low and significant relationship was observed between positive perception levels of elite mountain running athletes and success motivation. Positive perception is the opposite emotional state of psychological vulnerability. Therefore, in order to support this study, the correlation coefficient should indicate positive results. The motivation for success is directly proportional to the motivation in sports. From this point of view, it would not be wrong to note that Karharman's (2019) study also shows results that support this study. Again, in the Crimean study (2020), the psychological well-being and psychological vulnerability perceptions of women members of life and sports centers were examined and a meaningful negative relationship was found between the psychological well-being of the samples and psychological vulnerability perceptions. According to the findings of Kırım's (21) study, it would be correct to state that the psychological vulnerability levels of women decrease as the level of psychological well-being perception increases. When the similarity of the subjects is taken into account, the results supporting this study have emerged. Demir (11) examined the relationship between motivation Deceleration, anger levels and aggression in elite level boxing athletes in his study, and it was found that not being motivated in sports has a significantly positive and low-strength effect on anger and aggression perceptions in sports. Demir's (11) study also found results that support this study, and it was concluded that anger and aggression levels in sports also increase as perceptions of lack of motivation increase. Because; psychological vulnerability and perceptions of aggression and anger in sports show similarities. Mental toughness, on the other hand, is the opposite of psychological vulnerability. Eser (15) conducted an investigation of the relationship between the success motivation and mental endurance of athletes competing in the amputee Turkish super league in the football branch in his study and reached the results that the relationship is at a meaningful moderate level in a positive direction. In summary; As in many studies, Eser's (2022) study also reached results that support this study. Another study, Akdeniz (1), examined the correlation between physical education and sports teachers' perceptions of learned strength and psychological vulnerability in his study, and a significant level of negative low-power relationship was observed between learned strength and psychological Decency perceptions.

When the studies carried out in the literature are examined, it has been observed that the results supporting this study are generally obtained. As a result, it is clearly evident in both this study and literature

studies that the perception of psychological vulnerability negatively affects the perception of motivation in sports. As a result of the study; Depending on psychological vulnerability, when considering the solutions to the problems of inability to be motivated in sports, the psychological vulnerability levels of athletes should be determined and the topic of motivation in sports should be turned into an advantage.

REFERENCES

1. Akdeniz H. Beden eğitimi öğretmenlerinin öğrenilmiş ve güçlülük psikolojik kırılganlık düzeyleri arasındaki ilişkinin incelenmesi. Doktora Tezi, Sakarya Üniversitesi Eğitim Bilimleri Enstitüsü, Sakarya. 2018.
2. Akin A, Eker H. Turkish version of the psychological vulnerability scale: a study of validity and reliability. Germany 32th International Conference of the Stress and Anxiety Research Society. 2011.
3. Akin U. The predictive role of the self-compassion on psychological vulnerability in Turkish university students. International Journal of Social Science and Education, 2014; 4(3), 693-701.
4. Altıntaş A. Sporcuların zihinsel dayanıklılıklarının belirlenmesinde optimal performans duygu durumu, güdülenme düzeyi ve hedef yöneliminin rolü. Doktora tezi, Ankara Üniversitesi Sağlık Bilimleri Enstitüsü, Ankara. 2015.
5. Anshel MH. Sport psychology: from theory to practice. Arizona: Gorsuch Scarisbrick 3st ed. Scottsdale, 1997.
6. Baymur FB. Genel psikoloji. İstanbul: İnkılap-Aka Kitabevi. 1976.
7. Bilici H. Duygusal zeka, psikolojik kırılganlık ve yaşam doyumu ilişkisinde kısa semptomların aracı rolü. Yüksek Lisans Tezi. Trabzon Üniversitesi Lisansüstü Eğitim Enstitüsü. Trabzon. 2020.
8. Caz Ç, Kayhan RF, Bardakçı S. Spor yaralanması kaygı ölçeği'nin türkçeye uyarlanması: geçerlik ve güvenilirlik çalışması, Spor Hekimliği Dergisi, 2019; 54(1): 52-63.
9. Crocker J. Contingencies of self-worth: implications for self-regulation and psychological vulnerability, Self and Identity, 2002; 1:2, 143-149.
10. Çelik A. Spor kulüp yöneticilerinin çatışmayı yönetme stratejilerinin mükemmeliyetçilik özellikleri ve motivasyon düzeyleriyle ilişkisi. Doktora Tezi. Gazi Üniversitesi Sağlık Bilimleri Enstitüsü, Ankara. 2011.
11. Demir Ş. Elit düzey boksörlerin sporda güdülenme, saldırganlık ve öfke düzeyleri arasındaki ilişkinin incelenmesi. Yüksek Lisans Tezi. Bartın Üniversitesi Lisansüstü Eğitim Enstitüsü, Bartın. 2020.
12. Demirci R. Eğitim fakültesi ve spor bilimleri fakültesi öğrencilerinin depresyon ve motivasyon bilgi düzeylerinin karşılaştırılması.; Yüksek Lisans Tezi. Uşak Üniversitesi Sosyal Bilimleri Enstitüsü, Uşak. 2017.
13. Doğan C. Profesyonel futbolcularda duygusal zekâ ile motivasyon ilişkisinde kişilik tipinin aracı rolü. Yüksek Lisans Tezi, Çanakkale Onsekiz Mart Üniversitesi Lisansüstü Eğitim Enstitüsü. Çanakkale. 2022.
14. Doğan O. Spor psikolojisi. Ankara: Detay Yayıncılık. 2015.
15. Eser H. Türkiye ampute futbol süper ligi'nde oynayan sporcuların zihinsel dayanıklılık ve başarı motivasyonu arasındaki ilişkinin incelenmesi. Yüksek Lisans Tezi. Fırat Üniversitesi Sağlık Bilimleri Enstitüsü, Elazığ. 2022.
16. George D, Mallery M. SPSS for windows step by step: a simple guide and reference, 17.0 update. Boston: Pearson. 2010; 10.
17. Güder E. Romantik ilişki yaşayan bireylerde çocukluk çağı travmaları, psikolojik kırılganlık ve ilişki doyumu arasındaki ilişkinin incelenmesi. Yüksek Lisans Tezi. Yakın Doğu Üniversitesi Lisansüstü Eğitim Enstitüsü, Lefkoşa. 2022.
18. Hardy L, Jones G, Gould D. Understanding psychological preparation for sport: theory and practice of elite performers. Chichester, West Sussex: John Wiley ve Sons. 1997.
19. Hosseinalipour F. Üniversiteli sporcu öğrencilerin, sporda motivasyon düzeyleri ve stresle başa çıkma yöntemlerinin incelenmesi. Yüksek Lisans Tezi. Gazi Üniversitesi Eğitim Bilimleri Enstitüsü, Ankara. 2015.
20. Kasil Ç. Kayak ve curling eğitimi alan sporcu bireylerin tükenmişlik durumları ile spora özgü başarı motivasyon düzeylerinin incelenmesi. Yüksek Lisans Tezi. Trabzon Üniversitesi, Lisansüstü Eğitim Enstitüsü, Trabzon. 2023.
21. Kırım G. Spor ve yaşam merkezlerine üye olan kadınların psikolojik iyi oluş ve psikolojik kırılganlık düzeylerinin incelenmesi. Yüksek Lisans Tezi. Sivas Cumhuriyet Üniversitesi Sağlık Bilimleri Enstitüsü. Sivas. 2020.
22. Koçel T. İşletme yöneticiliği. İstanbul: Beta Yayınları. 2003.
23. Mechanic D, Tanner JL. Vulnerable people, groups, and populations: societal view. Health Aff Airs, 2007; 26 (5), 1220- 1230.
24. Mımaroğlu R. Vücut geliştirme ve fitness merkezlerinde spor yapan erkek bireylerin spora güdülenmesi (diyarbakır ili örneği). Yüksek Lisans Tezi. Fırat Üniversitesi Sağlık Bilimleri Enstitüsü, Elazığ. 2021.
25. Öcal K, Sakallı D. Turkish adaptation of the sport motivation scale II (SMS-II): Procedures of validity and reliability. International Journal of Sport Exercise and Training Sciences-IJSETS, 2018; 4(1), 39-48.
26. Özden E. Online eğitim alan öğrencilerin akademik motivasyon ve depresyon düzeyleri arasındaki ilişkinin incelenmesi. Yüksek Lisans Tezi. Doğu Akdeniz Üniversitesi, Lisansüstü Eğitim Öğretim ve Araştırma Enstitüsü, Gazimağusa, Kuzey Kıbrıs. 2022.

27. Pelletier LG, Rocchi MA, Vallerand RJ, Validation of the revised sport motivation scale (SMS-II). *Psychol Sport Exerc*. 2013; (14):329-41.
28. Rex CC, Metzler JN. Development of the sport injury anxiety scale. *Meas PhysEduc Exerc Sci*. 2016; 20(3): 14658.
29. Sarıçalı M, Satıcı SA. Bilinçli farkındalık ile psikolojik kırılganlık ilişkisinde utangaçlığın aracı rolü. *Hitit Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 2017; 10(1), 655- 670.
30. Satıcı SA. Psychological vulnerability, resilience, and subjective wellbeing: the mediating role of hope. *Personality And Individual Differences*, 2016; 10(2), 68-73.
31. Satıcı SA, Kayıs AR, Akın A. Predictive role of authenticity on psychological vulnerability in Turkish university students. *Psychological Reports: Mentaland Physicalhealth*, 2013; 112(2), 519-528.
32. Sınclair VG, Wallston KA. The development and validation of the Psychological Vulnerability Scale. *Cognitive Therapy and Research*, 1999; 23(2), 119- 129.
33. Sipahi Z. Genç futbolculara uygulanan on haftalık bilinçli farkındalık eğitim programının sporda güdülenme ve bilinçli farkındalık üzerindeki etkisi. Yüksek Lisans Tezi, Marmara Üniversitesi Sağlık Bilimleri Enstitüsü. İstanbul. 2021.
34. Taştan Z. Sporda güdülenme, öz yeterlik ve spora yönelik tutum arasındaki ilişkinin modellenmesi. Yüksek Lisans Tezi. Mersin Üniversitesi Eğitim Bilimleri Enstitüsü, Mersin. 2020.
35. Thoits PA. Life stress, social support, and psychological vulnerability: epidemiological considerations. *Journal of Community Psychology*, 1982; 10, 341-362.
36. Wang CE. Depression and cognitive vulnerability. Unpublished doctoral disseertation, Univer.of Tromsø, Norway. 2006.
37. Weinberg RS, Gould D. Foundations of sport and exercise psychology. Human Kinetics Publishers. 1995.
38. Yıldız A, Altıntaş A, Elmas S, Aşçı FH. Sporda güdülenme ölçeği-n'in psikometrik özelliklerinin incelenmesi. *Spor Hekimliği Dergisi*, 2019; 54(1): 33-44.
39. Zubin J, Spring B. Vulnerability: A new view of schizophrenia. *Journal of Abnormal Psychology*, 1977; 86(2), 103-126.