

The Effect of Motivation and Amotivation on Optimal Performance Emotion State in Sports Sciences Faculty Students

Spor Bilimleri Fakültesi Öğrencilerinde Motivasyon ve Amotivasyonun Optimal Performans
Duygu Durumu Üzerindeki Etkisi

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Abstract

The aim of this study is to investigate the effects of motivation and amotivation in sports on optimal performance emotional state among students of the Faculty of Sport Sciences. The "Motivation in Sports Scale and Continuous Optimal Performance Emotion State Scale-2" filled out by 230 female and 265 male students studying at the Yaşar Doğu Faculty of Sport Sciences at Ondokuz Mayıs University were evaluated. Independent t-test, One-way analysis of variance, LSD tests were used in the evaluation of the data and regression analysis was performed. In the study, a significant difference was found between women and men in the subscales of extrinsic motivation and amotivation ($p<0.05$, $p<0.001$). No significant difference was found in the dimensions of intrinsic motivation to know and achieve, intrinsic motivation to experience stimuli, introjection external motivation and extrinsic motivation for identification according to gender ($p>0.05$). In the comparison of motivational orientation scores in e-sports in sports classified as Group 1 (Basketball, Football, Handball, Volleyball), Group 2 (Boxing, Wrestling, Judo, Karate and Taekwondo) and Group 3 (Athletics, Orienteering, Tennis, Swimming), significant differences were found in all dimensions except for the dimensions of extrinsic motivation for extrinsic and extrinsic motivation for identification ($p<0.001$). Conclusion: It was concluded that motivation and amotivation in students of the Faculty of Sports varied according to gender, sports branches and sports performance status. It was also determined that motivational states had an effect on optimal performance emotional state. Activities to increase motivational states and decrease amotivation levels are recommended in order to increase the optimal performance emotional states of students of the Faculty of Sports.

Keywords Motivation, Amotivation, Student, Optimal performance, Sports Branch.

Öz

Bu çalışmanın amacı, Spor Bilimleri Fakültesi öğrencilerinde sporla ilgili motivasyon ve amotivasyonun optimal performans duygusal durumu üzerindeki etkilerini incelemektir. Ondokuz Mayıs Üniversitesi Yaşar Doğu Spor Bilimleri Fakültesi'nde öğrenim gören 230 kadın ve 265 erkek öğrencinin doldurduğu "Spor Motivasyonu Ölçeği" ve "Sürekli Optimal Performans Duygu Durumu Ölçeği-2" değerlendirilmiştir. Verilerin değerlendirilmesinde bağımsız t-testi, tek yönlü varyans analizi (ANOVA) ve LSD testleri kullanılmış, ayrıca regresyon analizi yapılmıştır. Çalışmada, kadın ve erkekler arasında dışsal motivasyon ve amotivasyon alt boyutlarında anlamlı fark bulunmuştur ($p<0,05$, $p<0,001$). Bilme ve başarma için içsel motivasyon, uyarıcıları deneyimleme için içsel motivasyon, içselleştirilmiş dışsal motivasyon ve tanımlama için dışsal motivasyon boyutlarında cinsiyete göre anlamlı bir fark bulunmamıştır ($p>0,05$). Sporlar, Grup 1 (Basketbol, Futbol, Hentbol, Voleybol), Grup 2 (Boks, Güreş, Judo, Karate ve Taekwondo) ve Grup 3 (Atletizm, Oryantiring, Tenis, Yüzme) olarak sınıflandırıldığında, e-sporlarda motivasyon yönelimi puanlarının karşılaştırılmasında, dışsal motivasyon ve tanımlama için dışsal motivasyon boyutları hariç tüm boyutlarda anlamlı farklar bulunmuştur ($p<0,001$). Sonuç olarak, Spor Bilimleri Fakültesi öğrencilerinde motivasyon ve amotivasyonun cinsiyet, spor branşı ve spor performans durumuna göre değiştiği belirlenmiştir. Ayrıca motivasyonel durumların optimal performans duygusal durumunu etkilediği saptanmıştır. Öğrencilerin optimal performans duygusal durumlarını artırmak için motivasyonel durumları yükselten ve amotivasyon seviyelerini azaltan etkinliklerin önerilmesi gerekmektedir.

Anahtar Kelimeler: Motivasyon, Amotivasyon, Öğrenci, Optimal performans, Spor Branşı

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Introduction

Motivation related to sports (motivation) refers to an individual's desire to be perfect, achieve goals and be successful in their sporting endeavors. Hellriegel and Woodman (2018) state that motivation is a functional relationship between effort and perceived performance levels in one aspect and reward expectations in the other. It includes psychological factors that affect a person's behavior, effort and persistence in order to achieve success, recognition and personal satisfaction in sports activities (Singh and Bal, 2024). Motivation is seen as the process that initiates, maintains and manages an activity (Wittrock, 1986). Motivation is the orientation towards a specific goal and the continuation of that process (Schunk, 1990). Motivation can be seen as a process that initiates any activity and plays a role in its direction, degree and continuity. Motivation is the power that activates behavior (Aydn, 2010). Motivation, as an internal state or sometimes as an internal desire, activates and directs behavior (Erdem, 2008). In achievement contexts, motivational processes are assumed to influence athletes' cognitions, actions, and emotional responses (Deci and Ryan, 2000). Motivation is defined as the behavioral event that directs, regulates, and empowers achievement behavior, leading, guiding, and reinforcing it (Roberts et al., 2007; Hagger and Chatzisaranti, 2007). Motivational processes play an important role in generating different emotional responses. Intrinsic motivation comes from within the individual and is driven by personal pleasure, satisfaction, and the intrinsic enjoyment of participating in sports. It refers to participating in an activity solely for the pleasure and satisfaction derived from doing the activity. When a person is intrinsically motivated, they voluntarily perform the behavior without material rewards or external constraints. On the other hand, extrinsic motivation involves external factors such as rewards, recognition, and reinforcement (Singh and Bal, 2024). For example, intrinsically motivated individuals tend to experience pleasant emotions (i.e., joy), while extrinsically motivated individuals are likely to experience unpleasant emotions (i.e., anxiety). In the literature examining the interaction between motivational regulation and emotion in sports, athletes' emotional responses have often been conceptualized within a global affect approach based on distinctions between pleasant and unpleasant. Previous studies have shown that autonomous motivation positively predicts pleasant emotion, while less self-determined or controlled forms of motivation predict greater unpleasant emotion (Gillet et al., 2013; Monse et al., 2017). External regulation refers to behavior that is controlled by external sources, such as material rewards or constraints imposed by others. Sports are often performed to receive praise from others and avoid criticism. Athletes who participate in sports because they receive praise from their coaches or because their parents pressure them to do so are extrinsically motivated (Ryan and Deci, 2020). With internal reflection, a previously external source of motivation is internalized to participate in sports due to internal pressures, such as guilt or anxiety, to appear aesthetically pleasing or to perform exceptionally. The identification construct refers to how a player connects to the external identity they acquire from their sport. Achievement-oriented individuals set specific, measurable, achievable, relevant and time-limited goals for themselves in sports. The third form of motivation identified in players is amotivation. These individuals experience feelings of inadequacy and lack of control. They are neither intrinsically motivated nor extrinsically motivated. When athletes are in such a situation, they can no longer find a good reason why they continue to train. They may eventually decide to quit sports and even give up their sports careers (Singh and Bal, 2024). It has been determined that a supportive motivational climate is positive for athletes' basic psychological need satisfaction, autonomous motivation and

optimal performance moods; whereas a restrictive motivational climate is negative (Başar and Sarı, 2024). Amotivation in sports is linked to negative outcomes such as boredom, unpleasant emotions and reluctance to participate in physical activity (Standage et al., 2003).

Optimal performance mood is accepted as the highest mental state in sports and exercise, which is formed by the relationship between the skills shown by the individual during physical activity and the felt situation, requirements or activity at that moment (Aşçı et al., 2007). Optimal performance mood leaves positive emotional effects on people, although not permanent (Cheng et al., 2015). An increase in optimal performance mood increases the athlete's participation in the activity. It even helps to create continuity in participation in the activity (Ada et al., 2012). When the optimal performance mood is good, the athlete focuses on the task throughout the activity (Csikszentmihalyi, 1990). The athlete enjoys doing his job. He integrates with the activity he does. He experiences positive feelings and knows that he is in control of all movements. An athlete with a good optimal performance mood feels a high level of self-confidence along with a sense of automaticity. They even make better decisions (Fournier et al., 2007). In the studies of Yamaner et al., (2020), it was determined that optimal performance mood scores are similar according to gender, team and individual sports. Optimal Performance Mood allows people to enjoy the activity they do, as well as to achieve high success in the sports branch they are involved in (Kahya and Küçükbiş, 2022). It was thought that the motivation and lack of motivation of the students of the faculty of sports sciences would affect their optimal performance mood. For this purpose, it was aimed to investigate the effect of motivation and lack of motivation in sports on optimal performance mood in students of the faculty of sports sciences.

Materials and Methods

Participants

In this study, the questionnaires filled out by 230 female and 265 male students of Ondokuz Mayıs University Yaşar Doğu Faculty of Sports Sciences who participated in sports competitions as teams and competitions were evaluated. In the comparisons according to branches, the students were divided into three groups as Group 1 sports (Football, Basketball, Volleyball, and Handball), Group 2 sports (Judo, Wrestling, Boxing, Taekwondo, Karate) and Group 3 sports (Tennis, Swimming, and Athletics, Orienteering). The questionnaires were filled out with voluntary participation. The questionnaires with deficiencies were excluded from the evaluation.

Data collection tools

Sports motivation scale

The Sports Motivation Scale is based on cognitive evaluation theory. The validity and reliability study of the scale developed by Pelletier et al. (1995) for Turkish athletes was conducted by Kazak (2004). The aim of the scale is to determine the level of intrinsic, extrinsic motivation and amotivation of the athlete in the sportive environment and to reveal the source of his/her motivation (Kazak, 2004). The scale has 28 items and 6 sub-dimensions. Dimensions: Intrinsic motivation to know and achieve, intrinsic motivation to experience stimuli, External regulation, Introjection,

Identification and Amotivation. Scoring

The score obtained for each sub-dimension is calculated by dividing the total score in the relevant sub-dimension by the number of items in the sub-dimension. Again,

intrinsic and extrinsic motivation scores are obtained by dividing the total score obtained from the items in the sub-dimensions constituting that dimension by the number of items (Kazak, 2004; Kelecek, 2013). Cronbach's Alpha values in the study; intrinsic motivation to know-achieve was 0.89, intrinsic motivation to experience stimuli was 0.74, and introjection was determined as 0.60. Again, identification was 0.79, external regulation was 0.85 and amotivation was 0.79.

Continuous Optimal Performance Mood Scale-2

The scale was adapted to Turkish by Aşçı et al., (2007). The scale consists of 9 sub-dimensions and a total of 36 items. The scale is in the form of a 5-point Likert. Scoring for each item: Never varies between 1 and Always 5. Point value expression: The high total score obtained indicates that the person's optimal performance mood is good and the lowest total score indicates that the optimal performance mood is bad (Gözmen and Aşçı, 2016).

Data Analysis

Data were evaluated with the 27.00 SPSS package program. It was determined that the data were suitable for normal distribution with the "Kolmogorov Smirnov Test". Independent t-test, one-way anova and LSD tests were used to compare the data. Regression analysis was performed for the effect of motivation and amotivation on optimal performance.

Ethics report: This study was approved by the decision of the Ondokuz Mayıs University Social and Human Sciences Research Ethics Committee dated 31.05.2024, meeting 5 and numbered 2024-643.

Results

Table 1. Anthropometric characteristics of students of the Faculty of Sports Sciences by gender

	sex	N	Mean	St. Deviation	t	p
Age (Years)	Female	230	21.38	3.15	-0,63	0,536
	Male	265	21.47	1.34		
Height (cm)	Female	230	173.84	6.90	16,25	0,000**
	Male	265	162.72	5.79		
Body weight (kg) (kg)	Female	230	70.50	9.88	19,55	0,000**
	Male	265	56.60	5.52		

**p<0,001

While the ages of the students of the faculty of sports sciences were similar according to gender, a significant difference was found between the variables of height and body weight (p<0.001).

Table 2. Comparison of the Motivational Orientation Scores of the Students of the Faculty of Sports Sciences

Motivational Orientation in Sports	sex	N	Mean	St. Deviation	t	p
Intrinsic Motivation to Know and Achieve	Female	230	5.70	1.13	-1,47	0,136
	Male	265	5.85	0.99		
Intrinsic Motivation to Experience Stimulus	Female	230	5.90	1.01	-1,53	0,116
	Male	265	6.06	0.98		
Extrinsic Motivation for Extrinsic	Female	230	4.58	1.30	-2,45	0,014*
	Male	265	4.91	1.30		
Introduction Extrinsic Motivation	Female	230	5.72	1.13	0,59	0,575
	Male	265	5.78	1.13		
Extrinsic Motivation for Identification	Female	230	4.94	1.25	0,479	0,636

	Male	265	4.99	0.98		
Amotivation	Female	230	2.89	1.03	5,69	0,000**
	Male	265	2.20	0.99		

*P<0.05 and **p<0.001

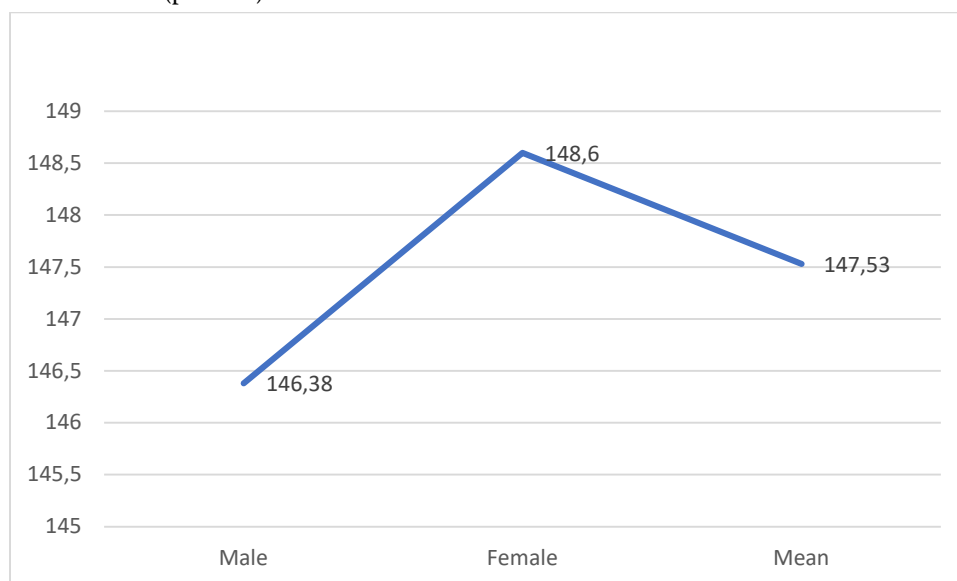
A significant difference was found between the motivational orientation scores of the students of the Faculty of Sports Sciences in the dimensions of external motivation and amotivation ($p<0.05$ and $p<0.001$).

Table 3. Comparison of motivational orientation scores in sports according to branches

Motivational Orientation in Sports	Branche	N	Mean	St. Deviation	F/LSD	p
Intrinsic Motivation to Know and Achieve	Group 1	200	5,48	1,09	36,22 G1,G2<G3	0,000**
	Group 2	175	5,47	1,12		
	Group 3	120	6,08	0,92		
Intrinsic Motivation to Experience Stimulus	Group 1	200	5,77	1,12	28,45 G1,G2<G3	0,000**
	Group 2	175	5,76	0,98		
	Group 3	120	6,19	0,90		
Extrinsic Motivation for Extrinsic	Group 1	200	4,66	1,33	1,78	0,214
	Group 2	175	4,65	1,20		
	Group 3	120	4,82	1,35		
Introduction Extrinsic Motivation	Group 1	200	5,53	1,11	18,43 G1,G2<G3	0,000**
	Group 2	175	5,54	1,02		
	Group 3	120	5,98	1,09		
Extrinsic Motivation for Identification	Group 1	200	4,97	1,15	1,25	0,960
	Group 2	175	4,98	1,03		
	Group 3	120	4,96	1,09		
Amotivation	Group 1	200	2,86	1,22	12,51 G1,G2>G3	0,000**
	Group 2	175	2,85	1,04		
	Group 3	120	2,21	1,24		

**p<0,001

In the comparison of motivational orientation scores in sports according to competition in team and combat sports, significant differences were found in all dimensions except for the external motivation for extrinsic and external motivation for identification dimensions ($p<0.001$).



Graph 1. Optimal performance mood mean scores by gender and in total

The optimal performance mood scores of female students are higher than the optimal performance mood scores of male students.

Table 4. The effect of motivation sub-dimensions on Optimal performance mood

Variables	B	St. Deviation	R ²	t	P-value
Constant	100.538	4.831	0,302	20.814	,000
Intrinsic Motivation to Know and Achieve	3.488	1.158		3.013	,003
Intrinsic Motivation to Experience Stimulus	5.208	1.056		4.934	,000
Extrinsic Motivation for Extrinsic	2.436	,677		3.604	,000
Extrinsic Motivation for Introjection	-1.095	,983		-1.116	,267
Extrinsic Motivation for Identification	-1.074	,815		-1.321	,189
Amotivation	-1.269	,596		-2.131	,034

Dependent Variable: Optimal performance

Discussion

In most studies in the literature, it has been stated that the motivation reasons of male and female athletes in sports differ according to the gender variable (Dalıkaran and Aslan, 2016; Yıldırım, 2017). There are studies in which men's external regulation averages were found to be higher than women (Kingston et al., 2006; Pelletier et al., 1995; Petherick and Weigand, 2002). In one study, no significant difference was found in the motivational orientations of athletes according to gender (Ersöz et al., 2012). Again, Amorose and Horn (2001) found higher intrinsic motivation levels of men than women in their study. Esentürk (2014) found higher extrinsic motivation scores in male student athletes than in female student athletes. Uzun et al., (2018) found statistically significant differences in intrinsic and extrinsic motivation and motivation dimensions according to gender in their study. In the study of Akyol and İmamoğlu (2019), no significant difference was found in the motivational orientation scores of female and male students, while a significant difference was found in the amotivation subscale. Burcu (2019) also found a significant difference in the extrinsic motivation and amotivation subscales of motivation according to gender. In our study, a significant difference was found between females and males in the extrinsic motivation and amotivation subscale for external ($p < 0.05$, $p < 0.001$). No significant difference was found in the dimensions of intrinsic motivation to know and achieve, intrinsic motivation to experience stimuli, introjection extrinsic motivation and identification extrinsic motivation according to gender ($p > 0.05$). While male athletes are more motivated by intrinsic factors or in other words, the need for power, competition and challenge, female students are mostly guided by extrinsic motives such as body weight control and appearance (Egli et al., 2011). It has been stated that social factors and image are stronger motivators for women and that competence and competition are valued more by men (Koivula, 1999).

Kelecsek S. (2013) found the lowest score for both female and male athletes and all participants in the amotivation sub-dimension in his study. The lowest amotivation

score was found in our study. The results of the two studies are similar in terms of scoring. Many studies have shown that athletes participate in sports with both intrinsic and extrinsic motivations (Bakker, 1993). The findings obtained in the studies have revealed that intrinsic motivations such as entertainment and competition have a strong effect on commitment and continuity in sports. On the other hand, motivations related to the body and extrinsic motivations such as rewards are not very effective in commitment and continuity in sports (Tiryaki, 2000). In the study of Yıldırım (2017), it was stated that the general motivation scores of the students did not show a significant difference according to the type of sport. Ersöz et al. (2012) found that individuals involved in team sports had higher averages in the “Experiencing the stimulus” sub-dimension than individuals involved in individual sports. Almagro et al. (2010) found in their study that basketball players behave more self-determined than football players and also have higher scores in the internal regulation sub-dimension for knowing and achieving. Kucukibis and Gul (2019) found no difference in the scores of “Knowing - Achieving, Experiencing Stimulation”, Introjection, Identification and Total among students who do “Individual Sports or Team Sports”. They found the difference between the two groups only in the “amotivation dimension” significant. In this study, in the comparison of motivational orientation scores in e-sports in sports classified as Group 1 (Football, Basketball, Volleyball, Handball), Group 2 (Judo, Wrestling, Boxing, Taekwondo, Karate) and Group 3 (Tennis, Swimming, Athletics, Orienteering), significant differences were found in other dimensions except for the dimensions of extrinsic motivation for extrinsic and extrinsic motivation for identification ($p < 0.001$). Sports classified as Group 1 (Game sports) and Group 2 (Combat sports) differed from sports classified as Group 3 in some motivational and motivational dimensions. This may be due to the fact that in addition to the personal characteristics of student athletes, game and combat sports are similarly affected by many factors such as the spectator factor in competitions. In this study, optimal performance emotional state scores were found to be higher in female students (149.23 points) than male students (147.25) (Graph 1). The highest score of the scale (since the highest score is 5 from each item and there are 36 questions) is calculated as 180 (Gözmen and Aşçı, 2016). Considering that the average score obtained from this study is 148.24, the optimal performance emotional states of the students can be considered good.

Başar and Sarı (2024) stated in their study that coach-based motivational climate has a positive effect on optimal performance mood according to the regression analysis results. As a result of the regression analysis conducted in this study (Table 4), a significant regression model was obtained between motivation sub-dimensions and optimal performance mood $F(6, 425) = 30.099$, $p = 0.000$. The motivation sub-dimensions; intrinsic motivation to know and achieve, intrinsic motivation to experience stimuli, extrinsic motivation for external, introjection extrinsic motivation, extrinsic motivation for identification and amotivation dimensions explain 30.2% ($r^2 = 0.302$) of the variation in optimal performance mood. According to the resulting regression model, a 1-unit increase in the intrinsic motivation to know and achieve sub-dimension will cause a 3.488-unit increase in the optimal performance mood, a 1-unit increase in the intrinsic motivation to experience stimuli sub-dimension will cause a 5.208-unit increase, a 1-unit increase in the extrinsic motivation dimension will cause a 2.436-unit increase, a 1-unit increase in the introjection-extrinsic motivation sub-dimension will cause a 1.095-unit decrease, a 1-unit increase in the identification sub-dimension will cause a 1.074-unit decrease, and a 1-unit increase in the amotivation sub-dimension will cause a 1.269-unit decrease. It can be said that the intrinsic motivation to know and achieve, intrinsic motivation to experience stimuli, and extrinsic motivation sub-dimensions have positive effects on the optimal performance mood of the participants,

and introjection-extrinsic motivation, external motivation for identification, and amotivation have negative effects.

The estimated regression equation calculated in the study is expressed as;

“Optimal performance = 100.538 + 3.488* Intrinsic Motivation to Know and Achieve + 5.208* Intrinsic Motivation to Experience Stimulus +2.436* Extrinsic motivation for extrinsic -1.095* Introjection extrinsic motivation -1.074* Extrinsic motivation for identification -1.269* Amotivation”. They stated that intrinsic motivation is a determining factor on optimal performance emotional state (Moneta 2004, Moreno et al., 2010). There are also studies that determine the positive relationship between intrinsic motivation and optimal performance emotional state (Altıntaş et al., 2013; Kowal and Fortier, 2000; Fournier et al., 2007; Murcia et al., 2008). In this study, it was found that intrinsic motivation to know and achieve, intrinsic motivation to experience stimuli, and extrinsic motivation for extrinsic had a positive effect on optimal performance mood. There are also studies that found a negative relationship between extrinsic motivation and optimal performance mood (İlhan et al., 2021). In this study, extrinsic motivation and amotivation for identification had a negative effect on optimal performance. In order to increase students' optimal performance mood, studies should be included that will increase positive motivational states and reduce amotivation.

Conclusion

It was concluded that motivation and amotivation states in students of the Faculty of Sports varied according to gender, sports branches, and sports performance status. It was also determined that motivational states had an effect on optimal performance mood. Activities to increase motivational states and reduce amotivation levels are recommended for increasing the optimal performance mood of students of the Faculty of Sports.

Kısaltmalar / Abbreviations

SD	Standart sapma (Standard deviation)
X	Ortalama (Mean)
SPSS	Sosyal bilimler için istatistik paketi (Statistical package for the social sciences)
p value	Anlamlılık değeri (Significant value)
t value	T değeri (T value)
N	Katılımcı sayısı (Number of participant)
B	Regression Coefficient → Regresyon Katsayısı
R ²	Coefficient of Determination → Belirleme Katsayısı

Beyanlar / Declarations

Etik Onay ve Katılım Onayı / Ethics approval and consent to participate

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citation rules were followed in accordance with the 'Higher Education Institutions Scientific Research and Publication Ethics Guidelines'; no alterations were made to the collected data, and this study has not been submitted for evaluation to any other academic publication medium. The author is solely responsible for any violations that may arise in connection with this article. All participants voluntarily participated in this study.

Veri Ve Materyal Erişilebilirliği / Availability of data and material

Bu çalışmanın bulgularını destekleyen veriler, makul talepler üzerine sorumlu yazardan temin edilebilir. Veri seti yalnızca akademik amaçlar için erişilebilir olacak ve verilerin herhangi bir kullanımı, orijinal çalışmayı referans gösterecek ve katılımcıların gizliliğini koruyacaktır.

The data that support the findings of this study are available from the corresponding author upon reasonable request. The dataset will be accessible only for academic purposes, and any use of the data will recognize the original study and maintain the confidentiality of the participants.

Çıkar Çatışması / Competing interests

Yazarlar, bu makalede sunulan çalışmayı etkileyebilecek herhangi bir çıkar çatışması veya kişisel ilişkiye sahip olmadıklarını beyan etmektedirler.

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Yazarlar çalışmaya eşit katkıda bulunmuştur.

The authors contributed equally to this work.

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