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THE EFFECT OF EMPATHY ON AGGRESSION: A PSYCHOLOGICAL RESILIENCE PERSPECTIVE

O EFEITO DA EMPATIA NA AGRESSÃO: UMA PERSPECTIVA DE RESILIÊNCIA PSICOLÓGICA

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Abstract: This study examines the complex relationship between empathy, aggressive behavior, and psychological resilience. The aim of the research is to understand the psychological resilience and emotional balance of basketball players, with a particular focus on the roles of empathy and aggressive behaviors. The study's sample consists of 94 active basketball players competing in the Turkey Basketball 1st and 2nd Leagues. The data collection instruments employed include a short psychological resilience scale, an empathy scale in the sports context, and a scale for measuring aggression and anger in sports. The findings support the idea that empathy promotes positive interactions among individuals and reduces aggressive behavior ($\beta = -.30$, $p < .05$). Furthermore, a crucial discovery is that psychological resilience serves as a mediator in this relationship. A positive relationship is observed between psychological resilience and empathy ($\beta = .17$, $p < .05$), while a negative relationship exists between psychological resilience and both aggression and anger ($\beta = -.57$, $p < .05$). It is concluded that enhancing empathy skills among basketball players and providing support for psychological resilience can contribute to improved performance in competitive environments and the maintenance of emotional balance.

Keywords: Empathy. Aggression. Anger. Psychological resilience. Basketball.

Resumo: Este estudo examina a complexa relação entre empatia, comportamento agressivo e resiliência psicológica. O objetivo da investigação é compreender a resiliência psicológica e o equilíbrio emocional dos jogadores de basquetebol, com particular enfoque nos papéis da empatia e dos comportamentos agressivos. A amostra do estudo consiste em 94 jogadores de basquete ativos competindo na 1ª e 2ª Ligas de Basquete da Turquia. Os instrumentos de recolha de dados utilizados incluem uma escala curta de resiliência psicológica, uma escala de empatia no contexto desportivo e uma escala para medir agressividade e raiva no desporto. Os resultados apoiam a ideia de que a empatia promove interações positivas entre os indivíduos e reduz o comportamento agressivo ($\beta = -0,30$, $p < 0,05$). Além disso, uma descoberta crucial é que a resiliência psicológica serve como mediadora nesta relação. Observa-se uma relação positiva entre resiliência psicológica e empatia ($\beta = 0,17$, $p < 0,05$), enquanto existe uma relação negativa entre resiliência psicológica e agressão e raiva ($\beta = -0,57$, $p < 0,05$). Conclui-se que o aprimoramento das habilidades de empatia entre os jogadores de basquetebol e o apoio à resiliência psicológica podem contribuir para a melhoria do desempenho em ambientes competitivos e para a manutenção do equilíbrio emocional.

Palavras-chave: Empatia. Agressão. Raiva. Resiliência psicológica. Basquete.

1. Introduction

Sport is an activity in which individuals engage in physical activities, often striving to achieve their goals in a competitive environment (Tammelin et al., 2003). The success of an athlete in the competitive environment depends on performing the sport in the healthiest and highest performance manner. Sporting performance can be defined as the culmination of efforts made to achieve a required athletic task (Alaeddinoglu et al., 2022; Kostrzewa et al., 2020). Sporting performance is a combination of the athlete's physical abilities as well as their mental and tactical skills (Ashurali & Farrukh, 2023). The performance state, which arises from different combinations, can be viewed as a complex structure. The complexity of this structure is attributed to the multitude and diversity of factors affecting the outcome, which are assessed as intrinsic and extrinsic factors based on their sources (İhsan et al., 2015). External factors are the elements that affect athletic performance through their interaction with the physical or psychological components of the athlete, which do not originate from the athlete's body or structure. Internal factors, on the other hand, encompass factors that exist within the individual, which are partially inherited, subject to minor changes over time, and are minimally or not influenced externally (Spittle and Morris, 2007). Genetic factors, age, and gender are among the internal factors that determine physical attributes such as speed, strength, endurance, and flexibility. Additionally, mental factors such as self-confidence, motivation, concentration, empathy, and stress are also categorized as internal factors (Silva and Stevens, 2002). Stress is defined as a biological and psychological response that occurs when an individual is confronted with challenges, pressures, expectations, or threats in their life (Bedir, 2021). Studies have indicated that when not managed effectively, the stress frequently experienced by athletes in sporting environments can lead to adverse outcomes (Davis et al., 2007; Nicolas et al., 2011; Rumbold et al., 2018; Thomas and Mellalieu, 2008). The factors contributing to the emergence of stress, such as life difficulties, pressures, and expectations, are also related to individuals' psychological resilience. This is because psychological resilience is defined as the ability to cope with difficulties (Fletcher and Sarkar, 2013). Psychological resilience assists individuals in demonstrating resistance when dealing with challenging situations, such as stress, trauma, or change (Booth and Neill, 2017; Meredith et al., 2018). Psychological resilience encompasses a range of traits, skills, and

behaviors, including positive thinking, stress management, empathy, seeking social support, problem-solving skills, goal-setting, self-confidence, effective communication, flexibility, and adaptability. It is believed that the influence of psychological resilience is significant in helping athletes exposed to stress during sports competitions to function healthily and adaptively. Consequently, some studies have indicated the importance of psychological resilience in athletes in overcoming challenges and enhancing athletic performance (Blanco-García et al., 2021; Fletcher, 2018; Sarkar, 2017).

Empathy, which holds a significant place in individuals' daily lives, is a form of communication among athletes, where they interact and share their experiences (Balçıkanlı et al., 2019). Especially in team sports, it occurs in an environment where athletes must trust each other, show respect, and understand each other (Karaçam and Pulur, 2016; Woods et al., 2022). Therefore, empathy is also a crucial factor in direct or indirect communication among athletes (Schoofs et al., 2022). It is stated that empathic responses are negatively associated with prosocial and antisocial behaviors (Ángel Latorre-Román et al., 2020). Therefore, empathy has been investigated as a negative predictor of various antisocial behaviors (Jolliffe and Farrington, 2004), examining whether individuals with higher levels of empathy tend to exhibit less anger and aggressive behaviors towards others (Eisenberg et al., 1991; Mestre et al., 2019; Van Cleemput et al., 2014). Conversely, other studies have suggested that individuals with high levels of empathy may be prone to displaying less anger and aggression (Heym et al., 2021; Lemercier-Dugarin et al., 2021).

Another concept believed to affect athletic performance is the individuals' state of aggression and anger (Predoiu et al., 2022). While feelings of anger and aggression may be natural, controlling these emotions and not letting them manifest in behavior is crucial for both athletes' own performance and the safety of other athletes. Aggression is defined as any form of behavior directed towards another organism with the motivation to avoid a treatment, causing harm, or injury (Baron & Richardson, 2004). Aggressive behaviors are divided into two sub-dimensions. First, it is referred to as reactive or hostile aggression. Reactive aggression is an impulsive or emotionally aggressive response to minimal provocation, resulting from a loss of behavioral control. The second subtype is termed proactive or instrumental aggression. Proactive aggression is a planned, instrumental behavior involving calculated efforts to obtain significant resources (Abel et al., 2020). In sports, aggression is commonly addressed within the dimensions of sanctioned and unsanctioned actions. Acceptable aggression in sports does not deviate beyond the rules and

roles of the game, in contrast to unacceptable aggression. Empathy and psychological resilience are considered to be significant factors in enabling athletes to manage their aggression and anger emotions (Chatzimike-Levidi & Collard, 2022; Ali Besharat and Pourbohlool, 2012; Galli and Gonzalez, 2015; Gupta and McCarthy, 2022; Hosseini and Besharat, 2010; Sadri Damirchi et al., 2018; Sarkar and Fletcher, 2014).

Aggression and anger, believed to play a role in sporting performance, along with empathy, effective communication, and psychological resilience, are considered highly important in the field of basketball, which is among team sports. This is because basketball is one of the sports that involves frequent one-on-one confrontations, constant exposure to fouls, close physical contact, and a pressure factor related to calculating seconds (Silva, 2006).

Basketball players are required to possess skills such as understanding the positions of others in the game, observing the needs of their teammates, and comprehending the team's objectives (Fedorova et al., 2009). In basketball, it is asserted that the athletes' inclination towards helping each other, as well as their attitude of understanding and harmonizing with one another, are fundamental factors for success (Özkan and Tülin, 2020). Therefore, the levels of empathy among athletes are of great significance.

The aim of this study is to examine the impact of empathy and the concept of psychological resilience on the aggressive and anger behavior tendencies of basketball athletes. Competition and stress in the field of sports can have significant effects on athletes' ability to maintain emotional balance. In this context, this study focuses on how empathy affects athletes' levels of aggression and anger, and the mediating role of psychological resilience in this relationship. The results of this study, in understanding the factors that affect emotional balance and social relationships in athletes, and evaluating the impact of these factors on athlete performance, can provide a significant contribution to supporting strategies for enhancing athletes' psychological resilience and empathy abilities.

2. Materials And Methods

Research Model

This study was designed using a correlational research model, aiming to investigate the impact of empathy in basketball athletes on aggression and anger behaviors through the mediation of psychological resilience. In this context, Structural Equation Modeling (SEM) was employed to elucidate the predictive correlations among the variables (Figure 1 and 2).

Figure 1. Model 1

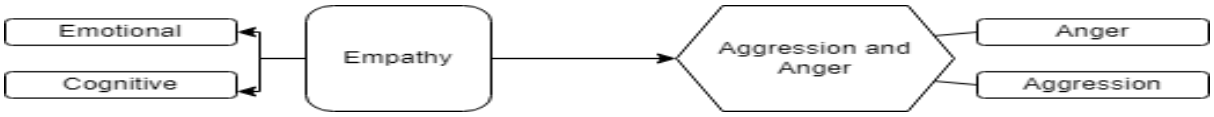


Figure 1. The relationship between empathy and aggression and anger behaviors

Figure 2. Model 2

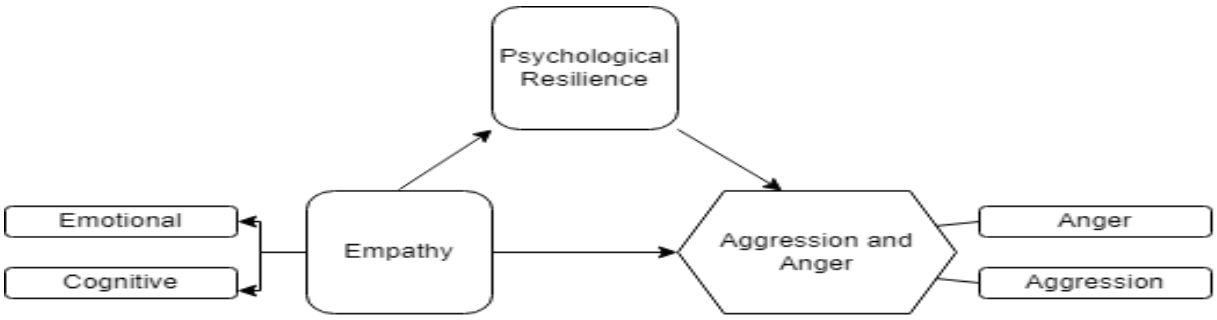


Figure 2. The role of psychological resilience in the relationship between Empathy and Aggression and Anger

Participants

In the study, 94 male athletes from a total of 38 teams competing in the Turkish Basketball (1st and 2nd) League during the 2022-2023 season participated. The sample of the study was selected by convenient sampling method, which is one of the non-random sampling methods (Gravetter & Forzano, 2015).

Data Collection Tools

The data collection tools in the study consist of 4 parts: personal information form, short psychological resilience scale, empathy scale in sports environment and aggression and anger scale in sports.

Personal Information Form

The personal information form prepared by the researchers includes the participants' age and how many years they have been playing basketball and their education level.

Brief Resilience Scale (BRS)

Brief resilience scale, developed by Smith, Dalen, Wiggins, Tooley, Christopher, and Jennifer Bernard (2008), was designed to measure individuals' psychological resilience. Its

Turkish adaptation was conducted by Doğan (2015). It is expressed as a 6-item, self-report-style measuring tool. In the Turkish adaptation study, the internal consistency coefficient of the scale was found to be .83. After reverse coding some items on the scale, the total score obtained represents psychological resilience. In this study, the Cronbach's Alpha coefficient calculated for the reliability of the scale's total score was .80.

Empathy Scale in The Sports Situations (ESSS)

Empathy scale in the sports situations is a scale developed by Erkuş and Yakupoğlu (2001). It was designed to assess individuals' emotions, thoughts, and behaviors towards their teammates, coaches, and opposing players in the context of sports. The scale consists of two sub-dimensions, namely 'emotional empathy' and 'cognitive empathy,' with a total of 16 items. During the development process, the researchers calculated Cronbach's Alpha coefficient, which was found to be .72 for emotional empathy and .79 for cognitive empathy. The overall reliability of the scale was reported as .78. In this study, the Cronbach's Alpha coefficient calculated for the total score reliability of the scale was .79.

Aggressiveness and Anger Scale (AAS)

Aggression and Anger Scale (AAS) was developed by Maxwell and Moores (2007). The scale consists of a total of 12 items, divided into 'anger' (6 items) and 'aggression' (6 items) subcategories. The Turkish adaptation of the scale was conducted by Gürbüz, Kural, and Özbek (2019). In the Turkish adaptation study, the researchers determined the Cronbach's Alpha coefficient for the reliability of the anger and aggression scale as .79. In this study, the Cronbach's Alpha coefficient calculated for the reliability of the scale was found to be .76.

Procedure

In the research, an online survey method was used for data collection. Contact was made with coaches actively involved in sports clubs to ensure the distribution of the survey to athletes. Prior to analyzing the collected data, a preliminary analysis was conducted to check for missing or erroneous data. No missing or erroneous data were encountered.

Data Analyzes

To test the hypothesis of the research, Structural Equation Modeling (SEM) was employed. Structural Equation Modeling is a collection of statistical techniques that allow for a series of relationships between one or more independent variables (Ullman & Bentler, 2012). SEM was ideal for the correlation analysis targeted in the research due to its ability to reveal parameters of correlation among latent variables and determine error variances. Data obtained from the scales were analyzed using the SPSS and AMOS software packages. Initially, the obtained data were examined to determine whether they met the normality assumptions required for establishing the structural equation model. The dataset exhibited the property of normal distribution. The "Maximum Likelihood (ML)" and "Covariance Matrix" were used as parameter estimation methods. These methods are commonly employed in SEM to estimate the model parameters and assess the goodness of fit between the proposed model and the observed data.

First, the normality assumptions of the data were examined to determine whether they met the requirements for constructing the structural equation model. This was done by examining the kurtosis and skewness coefficients to detect outliers. The data set exhibited a normal distribution characteristic. The normality tests of the utilized scales yielded results within the range of values for Happiness (Skewness -1.5 and Kurtosis +1.1), Leisure Attitude (Skewness -1.4 and Kurtosis +1.1), and Leisure Nostalgia (Skewness -1.4 and Kurtosis +1.1), indicating a homogeneous distribution. After testing the normality assumptions, factors such as variance inflation factor and autocorrelation were examined before the analysis. It was found that there was no autocorrelation and the variance inflation factors were within the required limits. Subsequently, it was decided that the data set was suitable for parametric statistical analysis, and the data analysis process commenced.

Common method variance was analyzed with the Harman Single Factor test. According to the Harman test, there is no problem of common method variance when all the expressions are collected in a single factor and there is less than 40% of the variance explained (Podsakoff et al., 2003). The results showed that the factors had an eigenvalue of “LA” and “H”, and the variances explained %37.61 and %35.87 which were <40%. According to the zero order correlation analysis, the correlation of the marker variable with both variables was found to be significant. Model 1 fit indices as folows: $\chi 2/df=2,13$; RMSEA=.06; CFI = .96; GFI = .94 and Model 2 fit indices as folows: $\chi 2/sd=1.88$; CFI=.95; GFI=.91; RMSEA=.05. According to these results, it can be stated that common method variance is not a problem in the study.

3. Findings

Table 1. Descriptive statistics for participants.

Age	N	%
18-21	34	34.0
22+	60	60.0
Sportive Age		
7 yıldan az	28	28.0
7+	66	66.0

In Table 1, it can be observed that 34% of the participant basketball players are in the 18-21 age range, while 60% are 22 years old and above. Additionally, it is evident that 66 athletes have been involved in basketball for more than 7 years, and 28 individuals have been active basketball players for less than 7 years.

Table 2. Examination of Pearson product moment correlation between variables.

	E	PR	AA	X̄	ss
E	1	. 177**	.-307**	2.75	.82
PR		1	.-576**	2.93	1.08
AA			1	3.20	1.20

**p≤.01 Note. (Empathy = E, Psychological Resilience = PR, Aggression and Anger =AA)

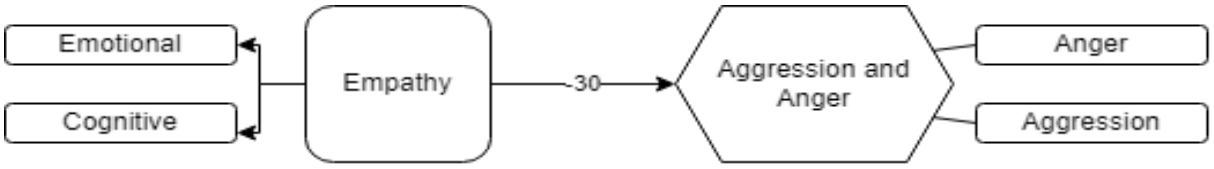
Table 3. Fit Index Values of the Model Showing the Effect of Empathy on Aggression and Anger

Fit indexs	*Acceptable Limit*	*Excellent*	*Values in the Model*	*Conformity*
CMIN/df	Between 2 and 5	≤2	2.13	Acceptable
RMSEA	Between .050 and .080	Between .000 and <.050	.06	Acceptable
GFI	.85 and above	=.90 and above	.94	Excellent
AGFI	.85 and above	=.90 and above	.88	Acceptable
CFI	.95 and above	.97 and above	.96	Acceptable
RMR	Between .050 and .080	Between .000 and <.050	.04	Excellent
NFI	.90 and above	.95 and above	.91	Acceptable

Table 4. Fit index values in the Empathy, Anger-Aggression and Psychological Resilience model

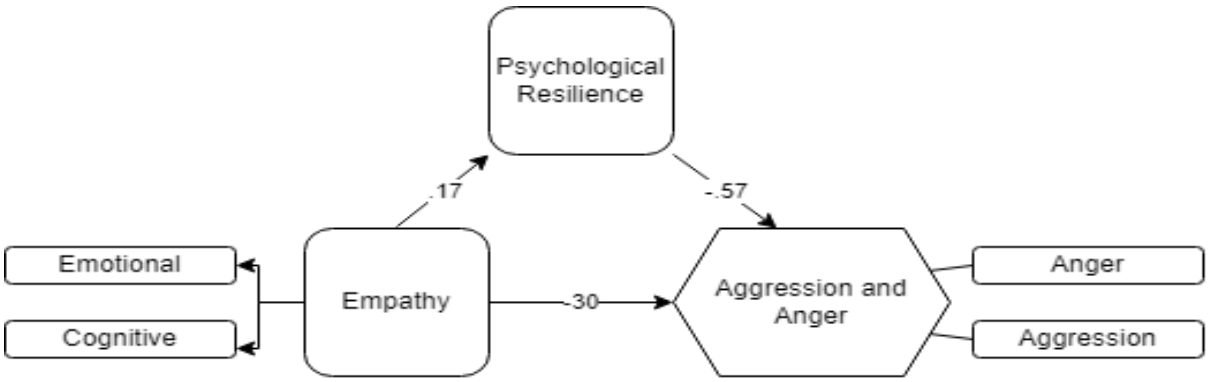
Fit indexs	*Acceptable Limit*	*Excellent*	*Values in the Model*	*Conformity*
CMIN/df	Between 2 and 5	≤2	1.88	Excellent
RMSEA	Between .050 and .080	Between .000 and <.050	.05	Acceptable
GFI	.85 and above	=.90 and above	.91	Excellent
AGFI	.85 and above	=.90 and above	.90	Excellent
CFI	.95 and above	.97 and above	.95	Acceptable
RMR	Between .050 and .080	Between .000 and <.050	.07	Acceptable
NFI	.90 and above	.95 and above	.98	Excellent

Figure 3



It has been found that there is a negative relationship (β=-.30, p<.05) between empathy and aggression and anger behaviors (Figure 3).

Figure 4



There is a negative relationship between empathy and aggression and anger behaviors (β=-.30, p<.05), and psychological resilience has a positive relationship with empathy (β=-.17, p<.05) and a negative relationship with aggression and anger (β). =--.57, p<.05) was found to be a relationship (Figure 4).

Based on the results of structural equation modeling analysis, it is demonstrated that the negative relationship between empathy and aggression and anger is mediated by psychological resilience (β=-.57, p<.05). In the mediating role of psychological resilience, a

positive relationship between empathy and psychological resilience (β=.17, p<.05) and a negative relationship between psychological resilience and anger (β=-.57, p<.05) were found (Figure 4).

4. Discussion and Conclusion

This study employed a structural equation model analysis to explore the intricate relationships among empathy, anger, and psychological resilience. The results have illuminated several noteworthy findings that have implications not only for the understanding of these psychological constructs but also for their practical applications.

First and foremost, our findings reaffirm the established notion that empathy and anger are inversely related. As individuals' levels of empathy increase, their propensity for anger decreases. This outcome aligns with prior research, consistently emphasizing the positive impact of empathy on interpersonal dynamics (Day et al., 2012; Singh, 1997; Stanger et al., 2016; Swit, 2023). It underscores the pivotal role of empathy in fostering harmonious and cooperative social interactions (Klimecki, 2019; Levy & Bader, 2020; Schoeps et al., 2020). However, what distinguishes this study is its revelation of the mediating role of psychological resilience within this relationship. This study revealed that there is a positive relationship between psychological resilience and empathy. In other words, individuals with higher levels of psychological resilience tend to exhibit greater empathy. Furthermore, a negative association was found between psychological resilience and both aggression and anger. This insight illuminates the significant role played by psychological resilience as an intermediary variable, positively influencing empathy levels while concurrently mitigating anger and aggression tendencies (see Figure 2). Naseem and Munaf (2020) emphasizes that there is an important need to develop strategies and interventions to increase resilience in aggression and anger behaviors. In addition, Christopher, Bowen and Witkiewitz (2020) emphasized in their study that it is very important to eliminate or reduce aggression and anger situations. It has also been stated that psychological factors are very important in this regard.

Remarkably, the literature has previously suggested the importance of psychological resilience in curbing aggressive and angry behaviors (Connor et al., 2003; Jang et al., 2018). Still, this study reinforces the idea that psychological resilience can serve as a catalyst in enhancing empathy, consequently promoting prosocial behaviors and reducing negative emotional reactions.

Implications

These findings hold particular significance in the context of sports psychology, specifically within the domain of basketball. As a sport rife with high-stress situations and intense competition (Di Fronso et al., 2013), basketball athletes face unique challenges that necessitate emotional intelligence and resilience. By enhancing athletes' empathy skills, they can foster healthier and more effective communication with teammates and coaches. An empathetic approach within the team can contribute to greater intra-team harmony and a deeper mutual understanding among athletes. Additionally, athletes must possess the emotional resilience required to confront and manage the inevitable pressures and adversities of competitive sports (Ajilchi et al., 2019).

5. Conclusion

In conclusion, this study underscores the pivotal role of empathy and psychological resilience in the emotional and interpersonal dynamics of basketball athletes. Enhancing empathy skills and bolstering psychological resilience emerge as potential strategies for athletes seeking to thrive in competitive environments while maintaining emotional equilibrium. These findings highlight the broader implications for individuals across various domains and underscore the importance of fostering empathy and resilience for personal and collective well-being.

Looking ahead, future research endeavors should delve deeper into these complex relationships, potentially exploring intervention strategies aimed at enhancing empathy and psychological resilience. Such efforts can contribute to the development of more effective and targeted interventions, ultimately benefiting individuals and experts alike in their pursuit of healthier, more harmonious relationships and improved emotional stability.

Limitations

In this study, which explores the intricate relationships among empathy, anger, and psychological resilience and yields significant findings, it is imperative to acknowledge certain academic limitations. Firstly, there exist limitations pertaining to the sample; the study was conducted on a limited sample size, focusing on a specific group, which may constrain the generalizability of the findings. Secondly, considerations must be given to limitations in the

data collection process, as the data rely on the accuracy and completeness of participants' responses. Thirdly, there are certain constraints related to variable selection and measurement, with uncertainties in the measurement of some variables. Lastly, the study cannot fully control external factors, and monitoring and controlling the effects of these factors may not always be feasible. These limitations necessitate a cautious approach to interpreting the study's results and generalizations, and future research endeavors may encourage more comprehensive studies aimed at overcoming these limitations.

Conflict Of Interest

I hereby state that the study was carried out without any commercial or financial associations that may give rise to a potential conflict of interest.

Ethics Statement

With the decision of the Faculty Ethics Committee numbered E-70400699-000-2300101339 taken at the session of Atatürk University, Faculty of Sport Science Sub-ethics Ethics Committee dated 27.03.2023, it was decided that the study was following the ethical rules and was unanimously accepted.

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