

The Relationship Between Vertical Jump Height and Negative Attack Performance According to Different Positions of Elite Male Volleyball Players

Elit Erkek Voleybolcuların Mevkilerine Göre Dikey Sıçrama ve Negatif Atak Performansı Arasındaki İlişki

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Abstract: This study was conducted to investigate whether there is a relationship between the mean vertical jump heights and negative attack percentages of elite male volleyball players. The study was conducted with 18 volleyball players (7 middle players, 8 spikers and 3 opposites). Vertical jump heights were measured with a VERT belt. Negative attack performance data were recorded with Data Voley4 professional software. According to the results, there was no correlation between the jump heights of the middle players and spikers and the negative attack data. In the case of opposite players, there was no correlation between ineffective attack and blocked attack and jump height, while there was a weakly positive correlation with attack error.

Keywords: Vertical jump height, negative attack performance, volleyball.

Özet: Bu çalışma, elit erkek voleybolcuların ortalama dikey sıçrama yükseklikleri ile negatif hücum yüzdeleri arasında bir ilişki olup olmadığını araştırmak amacıyla yapılmıştır. Çalışma 18 voleybolcu (7 orta oyuncu, 8 smaçör ve 3 pasör çaprazı) ile yapılmıştır. Dikey sıçrama yükseklikleri VERT kemeri ile ölçülmüştür. Negatif atak performans verileri Data Voley4 profesyonel yazılımı ile kaydedildi. Sonuçlara göre, orta oyuncuların ve smaçörlerin sıçrama yükseklikleri ile negatif atak verileri arasında bir korelasyon bulunmamıştır. Karşı oyuncularında ise etkisiz atak ve engellenen atak ile sıçrama yüksekliği arasında bir korelasyon bulunmazken, atak hatası ile zayıf pozitif bir korelasyon görülmüştür.

Anahtar Kelimeler: Dikey sıçrama yüksekliği, olumsuz atak performansı, voleybol.

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INTRODUCTION

In volleyball, attack is one of the main components that are decisive for winning the competition. By attacking, volleyball players try to score points by sending the ball to the opponent's court with various techniques such as dunking, placing, serving, and blocking (Kenny & Gregory 2006). Volleyball players often apply these techniques they use while attacking with vertical jumping. Therefore, vertical jumping is one of the most important motor skills for volleyball players (Ziv & Lidor 2010). Research shows the importance of vertical jumping skill for volleyball players and the relationship between vertical jump height and performance (Carlos, Petrus, Leonardo, Gustavo & Pedro, 2020; Riggs & Sheppard 2009). In a study, it was stated that in high-level men's volleyball, the highest vertical jump distance and maximum ball speed are required to overcome the opponent's block and create space in the opponent's defense. Generally, a higher jump allows the attacker to contact the ball at a higher height, reducing the possibility of being blocked by the opponent's block and increasing attacking performance (Junior 2018).

When the positions of male volleyball players are taken into consideration, it is seen that middle players, spikers and opposites are generally at the forefront during the attack. Middle players are one of the most active positions during the competition. They support the attack and defense both in the front center of the net and in the front back of the opposites. Whether she receives a pass or not, she jumps on the net as if she is going to attack at any moment, and she also plays a role in establishing a double block with her jumps (Quiroga 2010). Although the most obvious task of a dunker is to score points, similar to the middle players, they contribute to both offense and defense in the front and back zones. In order to make an effective dunk or contribute to a block, they need to have a

very good jumping performance (Palao, Manzanares & Ortega 2015). Opposite players are effective in offense in the front court. Their offensive and blocking performances and jumping capacity must be very good (Sotiropoulos, Drikos & Barzouka 2022). According to the studies, middle players, spikers and opposite players perform the highest jumping in competitions, respectively (Marques, Van den Tillaar, Gabbett, Reis & González-Badillo 2009; Mori, Yamada, Umezaki, Kida & Nomura 2022).

In the literature, there is a consensus that volleyball players' jump height and attacking performance are related, and as the jump height increases, the performance will improve. Similarly, according to the positions, it is a common conclusion that jump height is an important skill for middle players, opposites and spikers and that they are effective in attacking. However, there are also negative attacks in volleyball, called ineffective attacks or block-eating attacks (Millán-Sánchez, Morante Rábago & Ureña Espa 2017). To improve attacking performance in volleyball, it is necessary to reduce the percentage of negative attacks. Considering the relationship between jump performance and attack, is there a relationship between negative attack and jump height?

METHODS

Research Model: Descriptive correlation design, which is one of the quantitative research methods, was used in the research (Karasar, 2022).

Purpose of the research: This study was conducted to investigate whether there is a relationship between the mean vertical jump heights and negative attack percentages of elite male volleyball players at the positions of middle player, spiker and passer cross.

Research Group: Research was conducted with 18 professional volleyball players aged 23-30 years, including 7 middle players, 8 spikers and 3 opposites.

Table 1: Age, height, weight averages and height of jump of the participating athletes

Position	Age (Mean±SD)	Weight (Mean±SD)	Height (Mean±SD)	Height of Jump (Mean±SD)
Middle (n=7)	26,7±3,2	201,6 ± 2,7	89,7±8,8	65,72±5,68
Spiker (n=8)	24,8±4,3	194,6±2,5	86,5± 4,1	74,42±6,59
Opposite (n=3)	25,5±2,3	199,1±2,6	96±3,1	73,14±5,4

Data Collection: Data were collected during 10 training matches (Stanganelli, Dourado, Oncken, Mançan, & da Costa, 2008).

Jumping Measurements: The athletes were fitted with Vert belts at the end of the warm-up period of the demo competitions, and vertical jump data were recorded with the Vert Team System (version 2.0, Mayfonk Inc., Fort Lauderdale, FL, USA) during the competition. The device records jumps above 15 cm (Mahmoud, Othman, Abdelrasoul, Stergiou & Katz, 2015).

Negative Attack Technique: Technical analysis of the competitions was performed with Data Voley 4 professional (version 4.02.32 ginius spor, Italy), a volleyball-specific analysis program. The negative statistical data of attacking technical performance such as (-) negative attack, (/) blocked attack and (=) attack error percentages were evaluated (Silva, Lacerda & João, 2014).

Analysis of Data: Data analysed in the IBM SPSS 25.0 (IBM Statistical Package for the Social Sciences Corporation, Armonk, NY, ABD) package programme. The normality of the data obtained in the study was tested with the Kolmogorov-Smirnov test and it was determined that the data did not show a normal distribution. In the literature, skewness kurtosis values are also used in normality assumption applications. The value range of -1.5 +1.5 suggested by Tabachnick, Fidell & Ullman (2013) for kurtosis skewness values was taken into consideration and it was seen that the data were not within this range. Accordingly, the relationship between the average number of jumps by position and negative attack parameters was analyzed using Spearman correlation analysis. The coefficients obtained from the results were evaluated according to Schober, Boer & Schwarte, (2018) (.00-.10: insignificant, .10-.39: weak, .40-.69: moderate, .70-.89: strong, .90-1: very strong). The results were also checked by Pearson correlation analysis.

RESULTS

According to Table 2, there is no statistically significant correlation between the average jump height of middle players and ineffective attack ($r=-,036$; $p>0,05$), blocked attack ($r=,077$; $p>0,05$) and attack error percentage ($r=,059$; $p>0,05$).

Table 2: Spearman Correlation Analysis Results for the Relationship Between Height of Jumps and Attack Parameters of Middle Players

Negative attack		Height of jump (cm)
(-) %: Ineffective attack	r	-,036
	p	,409
	n	517
(/) %: Blocked attack	r	,077
	p	,081
	n	517
(=) %: Attack error	r	,059
	p	,179
	n	517

Table 3: Spearman Correlation Analysis Results for the Relationship Between Height of Jumps and Attack Parameters of Spikers.

Negative attack		Height of jump (cm)
(-) %: Ineffective attack	r	-,038
	p	,348
	n	620
(/) %: Blocked attack	r	,041
	p	,304
	n	620
(=) %: Attack error	r	-,007
	p	,862
	n	620

In Table 3, there is no statistically significant relationship between the average jump height of the spikers and ineffective attack percentage ($r=-,038$; $p>0,05$), blocked attack ($r=,041$; $p>0,05$), attack error percentage ($r=-,007$; $p>0,05$).

Table 4 shows that there is no statistically significant relationship between the average jump heights of the opposite players and ineffective attack percentage ($r=,054$; $p>0,05$) and blocked attack ($r=-,094$; $p>0,05$), while there is a strongly significant positive relationship with attack error percentage ($r=,178$; $p<0,01$).

Table 4: Spearman Correlation Analysis Results for the Relationship Between Height of Jumps and Attack Parameters of Opposite Players

Negative attack		Height of jump (cm)
(-) %: Ineffective attack	r	,054
	p	,398
	n	245
(/) %: Blocked attack	r	-,094
	p	,144
	n	245
(=) %: Attack error	r	,178**
	p	,005
	n	245

DISCUSSION

This study was carried out to investigate the relationship between the height of jumps in training matches and ineffective attack, blocked attack and error attack performance of professional male volleyball players including opposites, spikers and middles. A total of 18 athletes, including 3 opposites, 8 spikers and 7 middles, participated. During 10 training matches, the height of jumps, ineffective attack, blocked attack and error attack performances of the athletes were recorded. As a result of the recorded data, there was no correlation between the jump

heights of the middle players and spikers and the negative attack data. In the case of opposite players, there was no correlation between ineffective attack and blocked attack and jump height, while there was a strongly positive correlation with attack error.

Marcelino, Afonso, Cicero Moraes & Mesquita, (2014) analyzed 19 matches of the 2006 Men's World Championship in terms of attacking performance, technique and tactics according to player positions. As a result of their analysis, it was stated that opposite players had a higher attack percentage than the middle players, the middle players were more active when there was a block attack signal, and the other players were more active than the middle players when there was no block attack. Hsieh & Lamm (2015) conducted a study with 10 active subelite male volleyball players and stated that jump height is important to touch the ball at optimum contact height in block attack. However, he stated that the body's jump and take-off technique is more important than the jump height in reaching the contact height with the ball, in fact, good jump height performance is related to good technique. Stamm, Stamm & Tammerik, (2013) applied training to 10 female professional volleyball players to improve their jumping performance, and as a result of the training they applied to improve their jumping performance, it was seen that attack efficiency and competence also improved along with jumping performance.

Millán-Sánchez, Morante Rábago & Ureña Espa, (2017) analyzed 23 matches of the 2010 Men's World Championship according to player positions. As a result of the 2925 attack analysis, it was found that the negative attack percentages of opposite players were lower than the other positions, but their attacks from the back court were less successful than the attacks from the front court. Furthermore, Sheppard, Gabbett & Stanganelli, (2009) stated that although middle blockers perform more jumps than outside blockers because they have to jump even if they do not meet the ball, it cannot be said that they perform more attacks. Pisa, Zecchin, Gomes & Puggina, (2022) found that middle blockers had a higher jump load, outside blockers made maximum jumps, and setters made medium-height jumps. In block and attack jumps, it was observed that the middle blocker had the highest number of jumps, followed by the opposites.

Pawlik & Mroczek, (2023) evaluated the match performances of 39 male and 24 female volleyball players and found that while the jump height of male volleyball players decreased in each set, the jump height of female volleyball players increased. For male volleyball players, it was thought that the negative attack performance of the losing teams may be related to the jump height. Lima, Palao, & Clemente, (2019) reported that male volleyball players, whom they followed for 5 matches-15 sets, generally did not differ in jump height between sets. This result can be interpreted that jump height may not be effective in negative or positive attack performance.

As a result of the literature review and our study, it can be said that jump height and attacking performance vary according to positions, with middle players and spikers coming to the forefront. It can be said that there is no consensus on the relationship between attacking performance and jump height. According to some studies, there is a

relationship between negative attack and jump height, while according to others there is not. The reason for this may be the physical and physiological differences in the performance levels of the research groups. Therefore, it is recommended to evaluate the relationship between negative attack performance and jump height by considering different parameters, such as athletes' jumping techniques, arm reach, whole body and arm-leg muscle ratio.

Ethical Considerations: Institutional permission was obtained for the study with the information of Erzincan Binali Yıldırım University, Health and Sport Science ethics committee Number: 274267, Date: 07.07.2023.

Conflict of Interest: There is no conflict of interest between the authors.

Contribution of authors: All authors contributed equally to the literature and analysis of the study.

References

- Carlos, F. J., Petrus, G., Leonardo, F., Gustavo, C., & Pedro, P., (2020). Effects of the improvement in vertical jump and repeated jumping ability on male volleyball athletes' internal load during a season. *J Phys Educ Sport*, 20(5), 2924-31. doi:10.7752/jpes.2020.s5397
- Hsieh, C., & Lamm, Z. (2015). Attack height and jump height for men's volleyball players. 33rd International Conference on Biomechanics in Sports, Poitiers, France. In ISBS-Conference Proceedings Archive.972-975.
- Junior, N. K. M. (2018). Spike and block reach of the master Volleyball during the match according to the classification. *RBPFEEX-Revista Brasileira de Prescrição e Fisiologia do Exercício*, 12(79), 902-911. Retrieved from <http://www.rbpfex.com.br/index.php/rbpfex/article/view/1507>
- Karasar, N. (2022). Bilimsel araştırma yöntemleri (37. basım). s.114 Ankara: Nobel Akademik Yayıncılık.
- Kenny, B., & Gregory, C. (2006). Volleyball: Steps to success. 1st publication. Human Kinetics. Australia pp 60-61.
- Lima, R. F., Palao, J. M., & Clemente, F. M. (2019). Jump performance during official matches in elite volleyball players: A pilot study. *Journal of Human Kinetics*, 67, 259.
- Mahmoud, I., Othman, A. A. A., Abdelrasoul, E., Stergiou, P., & Katz, L. (2015). The reliability of a real time wearable sensing device to measure vertical jump. *Procedia Engineering*, 112, 467-472. <https://doi.org/10.1016/j.proeng.2015.07.226>
- Marcelino, R., Afonso, J., Cicero Moraes, J., & Mesquita, I. (2014). Determinants of attack players in high-level men's volleyball. *Kinesiology*, 46(2.), 234-241. Preuzeto s <https://hrcak.srce.hr/131926>
- Marques, M. C., Van den Tillaar, R., Gabbett, T. J., Reis, V. M., & González-Badillo, J. J. (2009). Physical fitness qualities of professional volleyball players: determination of positional differences. *The Journal of Strength & Conditioning Research*, 23(4), 1106-1111. doi: 10.1519/JSC.0b013e31819b78c4
- Millán-Sánchez, A., Morante Rábago, J. C., & Ureña Espa, A. (2017). Differences in the success of the attack between outside and opposite hitters in high level men's volleyball.
- Millán-Sánchez, A., Morante Rábago, J.C., & Ureña Espa, A. (2017). Differences in the success of the attack between outside and opposite hitters in high level men's volleyball. *Journal of Human Sport and Exercise*, 12(2), 251-256. doi:10.14198/jhse.2017.122.01
- Mori, Y., Yamada, Y., Umezaki, S., Kida, N., & Nomura, T. (2022). A Study on the Number of Jumps and Jump Height in Volleyball: From a Mock Game of College Men Players. *Advances in Physical Education*, 12(1), 1-10. Doi: 10.4236/ape.2022.121001
- Palao, J. M., Manzanares, P., & Ortega, E. (2015). Design and validation of an observation instrument for technical and tactical

- actions in indoor volleyball. *European Journal of Human Movement*, 34, 75-95.
- Pawlik, D., & Mroczek, D. (2023). Influence of jump height on the game efficiency in elite volleyball players. *Scientific Reports*, 13(1), 8931. <https://doi.org/10.1038/s41598-023-35729-w>
- Pisa, M. F., Zecchin, A. M., Gomes, L. G., & Puggina, E. F. (2022). External load in male professional volleyball: A systematic review. *Baltic Journal of Health and Physical Activity*, 14(2), 7. <https://doi.org/10.29359/BJHPA.14.2.07>
- Quiroga, M. E., García-Manso, J. M., Rodríguez-Ruiz, D., Sarmiento, S., De Saa, Y., & Moreno, M. P. (2010). Relation between in-game role and service characteristics in elite women's volleyball. *The Journal of Strength & Conditioning Research*, 24(9), 2316-2321.
- Riggs, M. P., & Sheppard, J. M. (2009). The relative importance of strength and power qualities to vertical jump height of elite beach volleyball players during the counter-movement and squat jump. *Journal of Human Sport and Exercise*, 4(III), 221-236. Doi:10.4100/jhse
- Stanganelli, L. C. R., Dourado, A. C., Oncken, P., Mançan, S., & da Costa, S. C. (2008). Adaptations on jump capacity in Brazilian volleyball players prior to the under-19 World Championship. *The Journal of Strength & Conditioning Research*, 22(3), 741-749.
- Schober, P., Boer, C., & Schwarte, L. A. (2018). Correlation coefficients: appropriate use and interpretation. *Anesthesia & Analgesia*, 126(5), 1763-1768. <https://doi.org/10.1213/ANE.0000000000002864>
- Sheppard, J. M., Gabbett, T. J., & Stanganelli, L. C. R. (2009). An analysis of playing positions in elite men's volleyball: Considerations for competition demands and physiologic characteristics. *J Strength Cond Res*, 23(6), 1858-1866. doi: 10.1519/JSC.0b013e3181b45c6a
- Silva, M., Lacerda, D., João, P.V. (2014). Game-related volleyball skills that influence victory. *Journal of Human Kinetics*, 41(2014), 173-179
- Sotiropoulos, K., Drikos, S., & Barzouka, K. (2022). Variations in attack patterns between female and male opposite players in top-level volleyball. *International Journal of Sports Science & Coaching*, 17(2), 400-411.
- Stamm, R., Stamm, M., & Tammerik, S. (2013). Development of jumping ability and its influence on the proficiency of attack in the female volleyball team of Tallinn University in the 2012/2013 season. *Papers on Anthropology*, 22, 192-202.
- Tabachnick, B. G., Fidell, L. S., & Ullman, J. B. (2013). *Using multivariate statistics* (Vol. 6, pp. 497-516). Boston, MA: pearson.
- Ziv, G., & Lidor, R. (2010). Vertical jump in female and male volleyball players: a review of observational and experimental studies. *Scandinavian Journal of Medicine & Science in Sports*, 20(4), 556-567. <https://doi.org/10.1111/j.1600-0838.2009.01083.x>
- sahaya göndererek sayı almaya çalışırlar (Kenny ve Gregory, 2006). Voleybolcular hücum ederken kullandıkları bu teknikleri genellikle dikey sıçrama ile uygulurlar. Bu nedenle dikey sıçrama voleybolcular için en önemli motor becerilerden biridir (Ziv ve Lidor, 2010). Yapılan araştırmalar dikey sıçrama becerisinin voleybolcular için önemini ve dikey sıçrama yüksekliği ile performans arasındaki ilişkiyi ortaya koymaktadır (Carlos vd., 2020; Riggs ve Sheppard, 2009). Yapılan bir çalışmada, üst düzey erkek voleybolunda, rakibin bloğunu aşmak ve rakibin savunmasında alan yaratmak için en yüksek dikey sıçrama mesafesi ve maksimum top hızının gerektiği belirtilmiştir. Genel olarak, daha yüksek bir sıçrama, hücum oyuncusunun topa daha yüksek bir yükseklikte temas etmesini sağlayarak rakibin bloğu tarafından engellenme olasılığını azaltır ve hücum performansını artırır (Junior, 2018). Pawlik & Mroczek, (2023) 39 erkek ve 24 kadın voleybolcunun maç performanslarını değerlendirmiş ve erkek voleybolcuların sıçrama yüksekliğinin her sette azaldığını, kadın voleybolcuların sıçrama yüksekliğinin ise arttığını tespit etmiştir. Erkek voleybolcular için, kaybeden takımların olumsuz hücum performansının sıçrama yüksekliği ile ilişkili olabileceği düşünülmüştür. Lima, Palao ve Clemente, (2019) 5 maç-15 set boyunca takip ettikleri erkek voleybolcuların sıçrama yüksekliğinin setler arasında genel olarak farklılık göstermediğini bildirmiştir. Bu sonuç, sıçrama yüksekliğinin negatif ya da pozitif atak performansında etkili olmayabileceği şeklinde yorumlanabilir.

Yöntem: 10 maç boyunca, 23-30 yaş arası 7 orta oyuncu, 8 smaçör ve 3 pasör çaprazı toplam 18 profesyonel voleybolcunun (Tablo 1) dikey sıçrama yükseklikleri ve negatif atak performansları kaydedilmiştir. Müsabakalar süresince sporculara giydirilen VERT kemeri ile dikey sıçrama yükseklikleri, Data Volley 4 yazılımı ile negatif atak performans verileri kaydedilmiştir. Veriler IBM SPSS 25.0 (IBM Statistical Package for the Social Sciences Corporation, Armonk, NY, ABD) paket programında analiz edilmiştir. Çalışmada elde edilen verilerin normalliği Kolmogorov-Smirnov testi ile test edilmiş ve verilerin normal dağılım göstermediği tespit edilmiştir. Literatürde normallik varsayımı uygulamalarında çarpıklık basıklık değerleri de kullanılmaktadır. Tabachnick, Fidell & Ullman (2013) tarafından basıklık çarpıklık değerleri için önerilen -1,5 +1,5 değer aralığı dikkate alınmış ve verilerin bu aralıkta yer almadığı görülmüştür. Bu doğrultuda, pozisyona göre ortalama sıçrama sayısı ile negatif atak parametreleri arasındaki ilişki Spearman korelasyon analizi kullanılarak incelenmiştir. Sonuçlardan elde edilen katsayılar Schober, Boer & Schwarte, (2018)'e göre değerlendirilmiştir (.00-.10: önemsiz, .10-.39: zayıf, .40-.69: orta, .70-.89: güçlü, .90-1: çok güçlü). Sonuçlar ayrıca Pearson korelasyon analizi ile de kontrol edilmiştir.

Sonuç ve Değerlendirme: Çalışma sonucunda orta oyuncuların (Tablo 2) ve smaçörlerin (Tablo 3) sıçrama yükseklikleri ile negatif atak verileri arasında herhangi bir korelasyon bulunmamıştır ($p > .05$). Pasör çaprazlarının (Tablo 4) durumunda, etkisiz atak ve engellenen atak ile sıçrama yüksekliği arasında bir korelasyon bulunmazken ($p > .05$), atak hatası ile zayıf pozitif bir korelasyon görülmüştür ($p < .05$). Sonuç olarak, sıçrama yüksekliği ve hücum performansının mevkilere göre farklılık gösterdiği ve sporcuların fiziksel özellikleri ile sıçrama becerilerinin etken olduğu, hücum performansı ile sıçrama yüksekliği arasındaki ilişki konusunda fikir birliği olmadığı söylenebilir. Bazı çalışmalara göre negatif atak ile sıçrama yüksekliği arasında bir ilişki varken, bazılarında ise yoktur. Bu nedenle, negatif atak performansı ile sıçrama yüksekliği arasındaki ilişkinin farklı parametreler göz önünde bulundurularak (sporcuların sıçrama teknikleri, kol uzanım mesafeleri, tüm vücut, kol ve bacak kas oranı gibi) değerlendirilmesi önerilmektedir.

GENİŞLETİLMİŞ ÖZET

Çalışmanın Amacı: Bu çalışma, orta oyuncu, smaçör ve pasör çaprazı pozisyonlarındaki elit erkek voleybolcuların ortalama dikey sıçrama yükseklikleri ile negatif atak yüzdeleri arasında bir ilişki olup olmadığını araştırmak amacıyla yapılmıştır.

Araştırma Problemleri: Profesyonel voleybolcularda, orta oyuncu, smaçör ve pasör çaprazı mevkilerine göre dikey sıçrama yükseklikleri ile etkisiz atak, hatalı atak ve blok yenen atak performansları arasında ilişki var mıdır?

Literatür Araştırması: Voleybolda hücum, müsabakayı kazanmak için belirleyici olan ana unsurlardan biridir. Voleybolcular hücum ederek smaç, plase, servis ve blok gibi çeşitli tekniklerle topu rakip