14 (2) (2025) 642 - 646
Journal of Physical Education, Sport, Health and Recreations
https://journal.unnes.ac.id/journals/peshr

The Effect of Imagery Training on The Results of Male Volleyball Athletes' Jump Service

Tegar Pramudia Laksana[1]✉, Ira Purnamasari M. Noors[2], Yopi Kusdinar[3] , Mulyana[4]

Sport Coaching Education Study Program, Faculty of Sports Education and Health, Indonesia University of Education, Indonesia[1234]

Article History

Received June 2025
Accepted June 2025
Published Vol.14 No.(2) 2025

Keywords:
VolleyBall ; Imagery; Service ; Jump Service

Abstract

Volleyball is a team game that is already popular among the public, which emphasizes good physical, technical, and psychological skills . Research This aiming For examine the effect of imagery training on the results of male volleyball athletes' jump service . Research methods This use method experiment with design study One Group Pretest Posttest Design involving 12 volleyball athletes son of Tectona Bandung club. Election sample use technique purposive sampling , with treatment as many as 8 meetings in a way intensive . Instrument study use service accuracy test (AAHPER) Service Accuracy is an instrument used to collect athlete data. before and after given treatment . After the data is obtained , it is analyzed use SPSS version 21 uses the paired sample T-test. Based on results data processing shows that Sig.(2tailed) value of 0.000 < 0.05. The results of the pretest-posttest and the overall difference in athletes obtained a pretest score of 98 %, then there was an increase in the posttest of 102 % with an average difference of 4%. Imagery Training has beeb proven to have significant effect on improving jump service skills in male volleyball athletes, through strengthening technical, biomechanical, psychological, and motot aspect.

How to Cite

Laksana, T. P., Noors, I. P. M., & Kusdinar, Y., & Mulyana. (2025). The Effect of Imagery Training on The Results of Male Volleyball Athletes' Jump Service. Journal of Physical Education, Sport, Health and Recreation, 14 (2), 642-646.

✉ Correspondence address :
E-mail: tegarpra003@gmail.com

p-ISSN 2460-724X
e-ISSN 2252-6773

INTRODUCTION

Volleyball is a team game that is already popular with the public, this sport has also held many national and international championships, and the basic techniques that must be mastered are underhand passing, overhand passing, service, spike, and block (Fallo & Hendri, 2016). The problem in this study is that when serving, athletes are often seen in a hurry, in the wrong starting position, a series of unrhythmic movements, inappropriate hand contact with the ball, disturbed concentration, inappropriate service targets, low accuracy levels and inconsistent results, and lack of confidence (Septiyanto & Suharjana, 2016). This technique is known as underhand service (Viera & Ferguson, 2010). Then, the development of service in the modern era has developed greatly, service is not only to start the game, but is increasingly important as an attacking weapon. This is because a revolutionary change in the rules occurred in 2000, with the introduction of the rally point system, where each rally produces points (FIVB, 2021). The use of technology has also evolved, such as video analysis and motion tracking systems, which have enhanced players' ability to develop and refine their serving technique (Gunes & Mirzeoglu, 2022).

Many factors influence this, both external and internal factors. The fact is that many players from junior to senior levels fail to utilize service techniques optimally, such as in the 2023 Proliga championship, Bank BNI Jakarta Lavani's service technique, a total of 74 services with a success percentage of only 3 points or 4.54%, while BNI Jakarta 46, a total of 64 services with a success percentage of only 4 points or 1.92% (Supriatna, 2024) . Then in the 2019 Proliga final match, the Bhayangkara Samator team, failed service, according to Indonesian statistical data : reaching 53% (Adib & Muhammad, 2019) . In high-level men's volleyball, the most commonly used service action modes are jump service and float service . When compared to float service , jump service produces higher ball speed. Based on the data above, it can be seen that the development of the first attack in the popular volleyball game uses the jump service type , according to the results of observations and observations through video observation, it was concluded that the Jumping service Top Spin has the highest ability value compared to float serve, and jump float , which is 46.08% (Paulo et al., 2018) . The low level of success and accuracy jump service by athlete moment training and competing indicates that concentration athlete Not yet stable and not yet formed moment do service techniques (Hasan Saifudin et al., 2023) . Often Also athlete not enough see about method exercise psychological because they think that the service is not very important. Efforts to improve the consistency of athletes' concentration in performing jump serves and increase the level of accuracy need to be given a mental training program. However, there are many ways to mental exercises, namely mindfulness , self-talk , imagery , biofeedback , exposure therapy , and cognitive restructuring (Feltz & Landers, 2016) . The author took one of the mental exercises, namely imagery training. Because, imagery is related to motor performance and practical implications (Cumming & Williams, 2014) , and imagery training helps athlete visualize and optimize aspect biomechanics service , like corner correct arm moment touching the ball, jump timing, and position optimal body (Sabila et al., 2022) .

Athletes do not maximize time train serve For practice concentration with Do exercise psychology . Athletes only perform technical service movements and do not maximize training on a series of movements and target directions of service . Training parable aiming For manage Attention And concentration athlete Which leads to concentration of service techniques thereby increasing success And accuracy from services (Lindsay et al., 2019) . Because, ability attack And suffer very required to anticipate the opponent's attack. That in the game of volleyball, the attack beginning or Can called with serve , very profitable For team. Benefits of mastering delivery services others: (1) able to put pressure on the opponent from the start of the game, (2) save energy if can kill the opponent from the service position , and (3) increase self-confidence player in the field (Azizah & Prastyo, 2020) .

This study is important because it combines biomechanical and psychological aspects in one training program, something that is rarely studied comprehensively in the field of volleyball. In addition, the imaginary approach has not been specifically applied to improve the jump serve of male volleyball athletes, which requires high concentration, precision of movement, and strong mental control. This indicates a gap in research that is relevant to be studied scientifically.

In previous studies, imagery training has been widely applied to sports and martial arts, such as in the study (Nakhafi, 2023) which discussed, "Self-Confidence Level of Kyorugi Athletes in the Taekwondo Sport Branch", then in the study (Prabowo Pandu Imbang, 2019) which discussed, "The Effect of Imagery and Concentration Training on Free Throw Accuracy in

UKM Basketball''. However, this can be a gap, where imagery training also needs to be proven to have an effect on the results of male volleyball athletes' jump service. As in previous research conducted by (Septiyanto & Suharjana, 2016), namely imagery training given to DIY volleyball athletes, had a significant effect on floating service accuracy . The previous research above was conducted on sports and martial arts, previous research suggests conducting research on the effect of imagery training on other sports, or other basic techniques, and the author has also not seen any research on the effect of imagery training on the results of male volleyball athletes' jump service. So the new thing from this research is the service technique used in the sport of volleyball, namely the jump service of male volleyball athletes.

The novelty of this study lies in the focus on imagination training for jump serve technique in male volleyball athletes which has not been widely studied in controlled experiments before. This study not only contributes to the development of sports training methodology based on sports psychology, but also expands the scope of imagination theory in the context of biomechanics and technical performance specifically in volleyball.

Sport ball volleyball is game Which prioritize stature, technique, and skills psychological Which okay, because in the game This played with high antisiame which drains a lot of energy. If the player have physical condition and skills it's psychological not enough Good So That impact bad For player performance, unfocused, and fast tired (Viera & Ferguson, 2010) .

Thus, the urgency of this research lies in the need to provide imagination training interventions that can improve the effectiveness of jump service as a whole, both in terms of technique, mentality, and competitive performance of athletes. The results of this study are expected to be a scientific reference for coaches, academics, and sports practitioners in designing training programs that are integrated mentally and physically for the sport of volleyball.

Therefore, based on the background of the problem that has been described above, the author is interested in knowing the effect of mental training, in this case focused on imagery training , on the jump service results of male volleyball athletes.

METHODS

This study uses a quantitative approach with an experimental method. The research design used is a one group pretest-posttest design , namely one experimental group that is given an initial measurement (pre-test), then given treatment in the form of imagination exercises, and ends with a final measurement (post-test). This design was chosen because it can directly measure changes or influences before and after being given certain and controlled treatments (William & Hita, 2019) .

The subjects of this study were 12 male volleyball athletes from the Tectona Bandung Club. The sample selection was carried out using a purposive sampling technique, with the following criteria: athletes who actively participate in club training, are willing to follow the entire series of treatments, and have basic jump service skills. Treatment was given during eight intensive meetings with a duration of each session of approximately 20 minutes, carried out before physical training began.

The instrument used in this study was the AAHPER Service Accuracy Test , a measuring instrument that assesses the level of accuracy of jump service results based on predetermined score zones. The test was conducted twice, namely at the pre-test and post-test, to determine changes in jump service technique skill performance after the intervention.

The treatment in the form of imagery training given refers to the Cognitive Specific (CS) type , namely visualization of specific techniques that focus on biomechanical aspects of movement such as body position, arm swing, jump, to the point of contact of the ball. Visualization is carried out in a relaxed state, with verbal direction from the researcher, and activates the five senses, as explained by Cumming & Williams (2014) that imagery is able to activate the sensorimotor system and become an effective mental training strategy to improve motor skills.

Data analysis was carried out using the Paired Sample t-Test statistical test using the SPSS version 21 program. (Fadluloh et al., 2024) Testing was carried out at a significance level of 0.05 to determine whether there was a significant difference between the pre-test and post-test results. If the Sig. (2-tailed) value <0.05, it can be concluded that imagery training has a significant effect on the jump service skills of male volleyball athletes.

RESULTS AND DISCUSSION

Table 1. Descriptive Statistical Data

	N	minute	Max	Amount	Means	Deviation Standard
Pre -Test	12	9	11	122	10.17	,718
Post- test	12	18	22	234	19.50	1,087

Based on **Table 1** from the data obtained in conducting the pre-test and post-test, the average value before being given treatment was 10.17 and after being given treatment, the average value was 19.50 with a standard deviation before being given treatment of ,*718 and after being given treatment of 1,087. The minimum value before being given treatment was 9 and after being given treatment, the value was 18. Then the maximum value before being given treatment was 11 and after being given treatment, the value was 22. After conducting the descriptive data, the data was processed to find the hypothesis, starting with the normality test and the homogeneity test. Based on Normality Test Data (Shapiro -Wilk), the significance value obtained in the pre -test and post-test (0.015; 0.074) > 0.05, then Ho is accepted. So it can be concluded that both data are normally distributed. Based on Data Homogeneity Test (Levene's Test), the significance value is 0.228 > 0.05, then Ho is accepted. So it can be concluded that the data has the same group variance (homogeneous). Based on T-Test (Paired Samples t-Test), it can be seen that the group has a t value of -9.333 with a Sig. value of 0.000. Based on the test results, the Sig. value of the group is <0.05 so that H0 is rejected . So it can be stated that there is a significant effect of the application of imagery training on the results of the jump service of male volleyball athletes.

Based on data processing in the research conducted by the author, there is a significant influence of imagery training on the results of male volleyball athletes' jump service. The results of the pre-test and post-test in addition to the results of statistical tests , the increase in jump service results can also be seen from the average results of the pre-test and post-test which have increased and there is a difference between the initial test and the final test, so it can be concluded that imagery training can affect the results of male volleyball athletes' jump service. This study uses the AAHPER (Service Accuracy) instrument , the sample group was given treatment for 8 meetings at once.

The results of this study indicate that after undergoing an imagery training program for 8 meetings, athletes will experience a significant increase in self-confidence, imagery training that is carried out routinely can have a significant impact on increasing athletes' self-confidence (Martin et al., 1999) . Research by (Slimani et al., 2016) also found that volleyball athletes who consistently apply imagery training have a higher level of self-confidence when performing complex service techniques. The results of this study are in accordance with research (Cumming & Williams, 2014) that how imagery is involved with motor skill performance and practical implications. Likewise in the study (Rhodes et al., 2024) entitled " Imagery training for athletes with low imagery capabilities". Imagery training, especially visual and kinesthetic imagery training , is an established method for improving performance in sports. Research in (Lebon et al. 2010) found that athletes who did imagery training before a physical training session showed greater improvements in ball speed and jump service accuracy compared to the control group. And research in (Smith et al. 2008) tested the effects of imagination training on jump serve technique performance in young athletes and found that the imagination group experienced a 23% increase in jump serve success compared to the control group which only increased by 8%.

Imagination helps athletes visualize and optimize biomechanical aspects of the jump serve , such as proper arm angle upon contact with the ball, jump timing, and optimal body position . The results of a study (Park & Jeon, 2023) showed that athletes who regularly performed imagination training experienced significant improvements in the biomechanical quality of their jump serve . Jump serve is a technique that requires high focus and emotional control. Research by (Hashim et al., 2011) revealed that imagination training helps athletes manage anxiety and maintain focus when performing a jump serve under match pressure. Research by (Lindsay et al., 2019) showed that male volleyball athletes who integrated imagination training into their regular training program experienced significant improvements in jump serve accuracy and consistency compared to a control group that only performed regular physical training.

CONCLUSION

Imagery training has been proven to have a significant effect on improving jump service skills in male volleyball athletes, through strengthening technical, biomechanical, psychological, and motor aspects, so it is recommended to be included in a routine training program. This study is expected to be a reference for coaches in developing mental abilities of athletes and for sports coaching education students. However, this study has limitations such as limited sample size, less than optimal field conditions, and timeliness in providing imagery treatment. Therefore, it is recommended for further research involving more samples, improving facilities, and implementing imagery training in various sports so that the scope and effectiveness of its application are wider.

REFERENCES

Adib, MA, & Muhammad. (2019). Statistical Analysis of Volleyball Skills Based on Volleyball Tactical Information Skill Surabaya Bhayangkara Samator Final Proliga 2019. Journal of Sports Achievement , 28–34.

Azizah, AR, & Prastyo, ND 2020. (2020). Accuracy of Floating Service of Volleyball Extracurricular Students at State Islamic Senior High School 3 Kebumen in the 2019/2020 Academic Year. Kridatama Journal of Science and Technology , 2 (02), 124–130.

Cumming, J., & Williams, S. E. (2014). Th e Role of Imagery in Performance . January 2012 . https://doi.org/10.13140/2.1.3274.5925

Fadluloh, FM, Sartono, H., & Kusumah, W. (2024). Athletes' Perception of Parental Support and Achievement Motivation : A Correlational Study with Early Age Individual Sport Athletes in Swimming . 412–421. https://doi.org/https://doi.org/10.31949/ijsm.v4i4.11454

Fallo, IS, & Hendri. (2016). Efforts to Improve Smash Skills in Volleyball Games Through Command Style Learning. Journal of Sports Education , 5 (1), 10–19.

Feltz, D. L., & Landers, D. M. (2016). The Effects of Mental Practice on Motor Skill Learning and Performance: A Meta-analysis. Journal of Sport Psychology , 5 (1), 25–57. https://doi.org/10.1123/jsp.5.1.25

FIVB. (2021). Official Volleyball . 1–88.

Gunes, B., & and Mirzeoglu, A.D. (2022). Application of Volleyball Teaching Through Distance Education Utilizing a Personalized System of Instruction. Strategies , 35 (4), 23–31. https://doi.org/10.1080/08924562.2022.2069623

Hasan Saifudin, Hilmy Aliriad, Mohamad Da'i, Suntoro, MAYH, & Nila, S. (2023). The Effect of Imagery Training on the Accuracy of Floating Volleyball Service in the Volleyball Extracurricular at MA Sunan Bonang Parengan. Journal of Sports Education Students , 4 (1), 107–121.

Hashim, H.A., Hanafi, H., & Yusof, A. (2011). Effect of progressive muscle relaxation and autogenic relaxation on mood conditions of young soccer players. Asian Journal of Sports Medicine , 2 (2), 99–105. https://doi.org/10.5812/asjsm.34786

Lebon, F., Collet, C., & Guillot, A. (2010). Benefits of motor imagery training on muscle strength. Journal of Strength and Conditioning Research , 24 (6), 1680–1687. https://doi.org/10.1519/JSC.0b013e3181d8e936

Lindsay, R., Spittle, M., & Larkin, P. (2019). The influence of mental imagery on skill performance in sport: A systematic review. Journal of Science and Medicine in Sport , 22 (December), S92. https://doi.org/10.1016/j.jsams.2019.08.111

Martin, K.A., Moritz, S.E., & Hall, C.R. (1999). Imagery use in sport: A literature review and applied model. The Sport Psychologist. Journal of Chemical Information and Modeling , 53 (9), 1689–1699.

Nakhafi, RN (2023). The Effect of Imagery Training on the Self-Confidence Level of Kyorugi Athletes in the Taekwondo Sport Branch of the Dojang The Master Taekwondo Club. AT-TAWASSUTH: Journal of Islamic Economics , VIII (I), 1–19.

Park, I., & Jeon, J. (2023). Psychological Skills Training for Athletes in Sports: Web of Science Bibliometric Analysis. Healthcare (Switzerland) , 11 (2). https://doi.org/10.3390/healthcare11020259

Paulo, A., Zaal, FTJM, Seifert, L., Fonseca, S., & Araújo, D. (2018). Predicting volleyball serve-reception at group level. Journal of Sports Sciences , 36 (22), 2621–2630. https://doi.org/10.1080/02640414.2018.1473098

Prabowo Pandu Imbang. (2019). The Effect of Imagery and Concentration Training on Free Throw Accuracy in the Basketball UKM of the Islamic University of Indonesia. Nursing Journal , 2 No. 2 (02), 1–6.

Rhodes, J., Nedza, K., May, J., & Clements, L. (2024). Imagery training for athletes with low imagery abilities. Journal of Applied Sport Psychology , 0 (0), 1–14. https://doi.org/10.1080/10413200.2024.2337019

Sabila, NP, Rahayuni, K., & Hanief, YN (2022). Development of imagery training to increase self-confidence in adolescent swimming athletes at the Garuda Aquatic Swimming Club, Kediri Regency. Journal Of Sport Education (JOPE) , 5 (1), 69. https://doi.org/10.31258/jope.5.1.69-80

Septiyanto, A., & Suharjana, S. (2016). The Effect of Imagery and Concentration Training Methods on the Accuracy of Floating Service of DIY Volleyball Athletes. Jurnal Cakrawala Pendidikan , 35 (3), 412–420. https://doi.org/10.21831/cp.v35i3.8249

Slimani, M., Tod, D., Chaabene, H., Miarka, B., & Chamari, K. (2016). Effects of mental imagery on muscle strength in healthy participants and patients: A systematic review. Journal of Sports Science and Medicine , 15 (3), 434–450.

Smith, D., Wright, C.J., & Cantwell, C. (2008). Beating the bunker: The influence of pettlep imagination on golf bunker shot performance. Quarterly Journal of Research in Exercise and Sport , 79 (3), 385–391. https://doi.org/10.1080/02701367.2008.10599502

Supriatna, E. (2024). The Effectiveness of Technical Ability of BNI 46 Team and Lavani Team in ProLiga Championship 2023. Inovatif: Journal of Social Science Research , 4 (3 SE-Articles), 6452–6460.

Viera, B.L., & Ferguson, B.J. (2010). Volleyball: Steps to Success . Leisure Press.

William, & Hita. (2019). Measuring the Level of Understanding of PowerPoint Training. JSM STMIK Mikroskil , 20 (1), 71–80.