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Concentration and smash accuracy: A correlational study

Eval Edmizal*), Eri Barlian, Alnedral Alnedral, Wilda Welis, Donie Donie
Universitas Negeri Padang, Indonesia

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ABSTRACT

The accuracy of the smash in the badminton game is very necessary so that the smash punch is difficult to return by the opponent. Accurate smash punches will help the player to win the match. This study aims to see the relationship between concentration and smash accuracy. This study used the correlational method by conducting concentration tests and smash accuracy to 20 coaching department students who were taking badminton courses. Concentration tests and smash accuracy tests were used to collect data on this study. The results showed that there was a significant relationship between concentration and smash accuracy in badminton. The coaches should provide concentration training to their players so that the players' smash accuracy can be more optimal.

Corresponding Author:

Eval Edmizal,
Universitas Negeri Padang
Email: Evaledmizal@fik.unp.ac.id

Introduction

Badminton is a sport that requires technical skills and effective strategies (Xu, 2015) (Chiminazzo *et al.*, 2018). Among the essential shots in the game, the smash stands out as a powerful attack executed from above the head to end a rally. The accuracy of the smash plays a crucial role in scoring points and controlling the game. However, in the pursuit of mastering smash accuracy, psychological factors also come into play (Hassan, 2017) (Phomsoupha and Laffaye, 2015). Concentration is a key factor that can influence a player's smash accuracy and quality (Le Mansec *et al.*, 2020).

High concentration enables players to focus their minds on executing precise shots, controlling speed and direction, and adapting to changing situations on the court (Coker, 2021). It allows them to maintain a clear mental state and make accurate decisions during the fast-paced game of badminton. Mental fitness plays a significant role in maintaining concentration throughout a match. Mental training techniques, such as meditation and relaxation exercises, can assist players in sustaining their focus during intense rallies and crucial moments of the game (Latif *et al.*, 2022).

Understanding and recognizing situational cues also contribute to concentration. Players who can read their opponents' movements and predict the dynamics of the game tend to maintain better concentration when executing smashes. Effective strategies can also aid in concentration maintenance. Players with clear and organized tactical plans are more likely to exhibit better concentration during smash shots. Knowing the desired outcomes and following a structured game plan can enhance focus and accuracy (Schläppi-Lienhard and Hossner, 2015) (Friedman *et al.*, 2015).

Conversely, a lack of concentration can have a negative impact on smash accuracy (Aziz *et al.*, 2020). Players who are easily distracted or unable to focus their minds effectively may produce inaccurate or overly forceful

smashes, leading to missed opportunities or unforced errors. By understanding the correlation between concentration and smash accuracy, badminton players of all skill levels can develop more effective training strategies to enhance their performance on the court. This article aims to provide valuable insights to players, coaches, and badminton enthusiasts who seek to elevate their game by improving concentration and smash accuracy.

Method

This study used correlational research, researchers wanted to see if there was a relationship between the level of concentration possessed by students and the level of smash accuracy of badiminton players. This study involved 20 students who were taking badminton courses. The participants were asked for their willingness to be sampled in this study by filling out a statement of willingness distributed before the study was conducted. The participants involved in this study consisted of 18 sons and 2 daughters. The participants were students who were in the 4th semester of their second year of study. Data collection began after they agreed to become participants in the study. The students were given an explanation on how to carry out the concentration test and smash accuracy test, After being given an explanation, the students were also asked to warm up and each of them had the right to try the form of the test previously described by the researcher. Once they are ready to be tested, the data collection process is carried out with the help of several research assistants.

The data obtained from the data collection process is then processed by checking the normality of the data as a condition for the correlation test. After the data is known to be normally distributed, then next to see the relationship between the two research variables, the pearson product moment test is carried out.

Results and Discussions

Before the correlation test is carried out, the data is first tested for normality. Here are the results of the data normality test for both variables.

Table 1. Normality test result

Variable	Sig	Interpretation
Concentration	0.21	Normal
Smash accuracy	0.07	Normal

Table 2. Statistics Descriptive

Variable	N	Mean	SD	Min	Max
Concentration	20	28	3.78	20	36
Smash accuracy	20	10	2.80	6	15

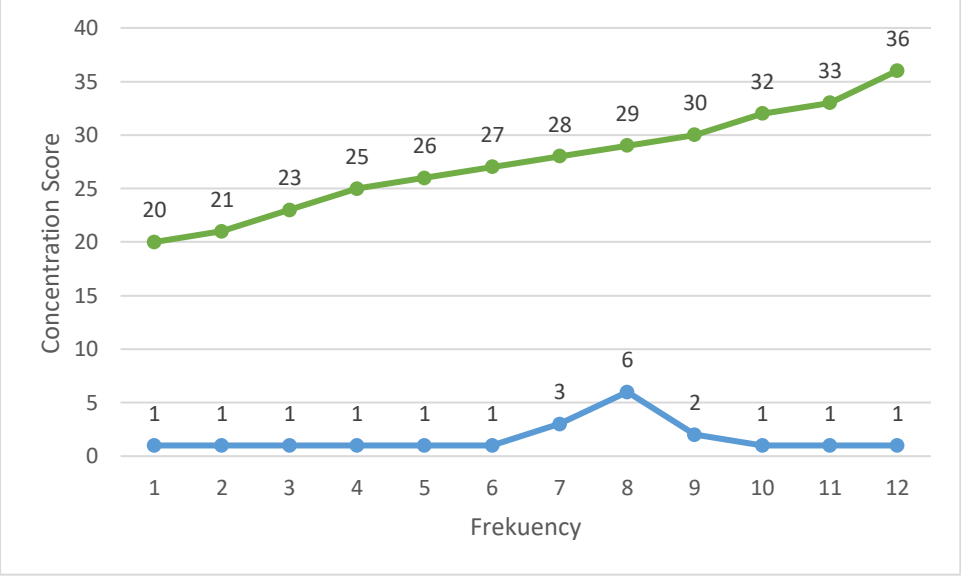

Figure 1. Concentration score and frekuency result

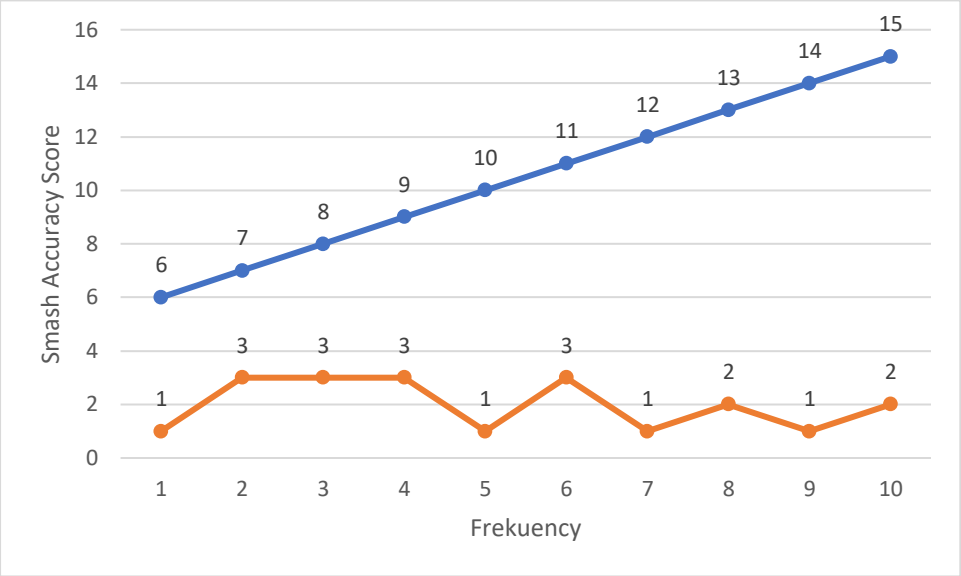

Figure 2. Smash accuracy score and frekuency result

After the normality test was carried out and the data was declared normal, the data analysis continued by conducting a pearson product moment correlation test. The results of the correlation test showed a value of 0.40.

The correlation between concentration and smash accuracy in badminton is a topic of great importance. Concentration plays a vital role in the execution of a precise and powerful smash (Launder and Piltz, 2013). When a player is fully focused, they are able to assess the trajectory of the shuttlecock, anticipate its movement, and make split-second adjustments to achieve optimal timing and contact. This heightened concentration allows for better control over the direction, speed, and angle of the smash, resulting in higher accuracy.

One key aspect that affects concentration is the mental state of the player (Popovych *et al.*, 2019). Factors such as anxiety, stress, or fatigue can hinder concentration and negatively impact smash accuracy. Players who are mentally prepared and have developed the ability to stay focused amidst pressure are more likely to consistently execute accurate smashes. Mental fitness training, including visualization exercises and mindfulness techniques, can be beneficial in improving concentration levels during high-pressure situations (Haydarkulovich, 2022) (Lazzaro, 2009).

Another important factor influencing concentration and smash accuracy is the player's level of experience and expertise. Experienced players have a better understanding of the game and possess the ability to anticipate their opponent's shots, allowing them to maintain concentration and react quickly when executing smashes. This familiarity with different game situations enables them to make more precise decisions and produce accurate smashes (McPherson, 2007) (Williams *et al.*, 2011) (Lees, 2003) (Roca *et al.*, 2011).

The relationship between concentration and smash accuracy also highlights the significance of tactical awareness. Players who possess a strong tactical understanding of the game can maintain concentration by constantly assessing the positioning of their opponents, identifying weaknesses, and exploiting openings to execute well-placed smashes. By strategically analyzing the game and making informed decisions, players can maximize their smash accuracy and increase their chances of scoring points (Costa *et al.*, 2010) (González-Víllora *et al.*, 2015) (Abdelkrim *et al.*, 2010).

It is worth noting that concentration is a skill that can be developed through deliberate practice and training (Plant *et al.*, 2005) (Rousmaniere *et al.*, 2017). Coaches and players can incorporate specific exercises into their training routines to improve concentration levels. Drills that simulate game-like situations, where players must focus on executing accurate smashes while under pressure, can help enhance their ability to concentrate during actual matches. Additionally, regularly engaging in mental training exercises can strengthen the player's ability to maintain concentration for extended periods (Rousmaniere *et al.*, 2017) (Williams, Farmer and Manwaring, 2008).

Conclusions

The correlation between concentration and smash accuracy in badminton is undeniable. The ability to stay fully focused allows players to execute precise and powerful smashes, giving them an advantage in scoring points. By recognizing the importance of concentration and implementing strategies to enhance it, players can improve their smash accuracy and overall performance on the badminton court.

References

Abdelkrim, N. Ben *et al.* (2010) 'The effect of players' standard and tactical strategy on game demands in men's basketball', *The Journal of Strength & Conditioning Research*, 24(10), pp. 2652–2662.

Aziz, A.R. *et al.* (2020) 'Effects of Ramadan fasting on match-related changes in skill performance in elite Muslim badminton players', *Science & Sports*, 35(5), pp. 308-e1.

Chiminazzo, J.G.C. *et al.* (2018) 'Technical and timing characteristics of badminton men's single: comparison between groups and play-offs stages in 2016 Rio Olympic Games', *International Journal of Performance Analysis in Sport*, 18(2), pp. 245–254.

Coker, C.A. (2021) *Motor learning and control for practitioners*. Routledge.

Costa, I.T. da *et al.* (2010) 'Influence of relative age effects and quality of tactical behaviour in the performance of youth soccer players', *International Journal of Performance Analysis in Sport*, 10(2), pp. 82–97.

Friedman, D. *et al.* (2015) 'From imitation to collusion: Long-run learning in a low-information environment', *Journal of Economic Theory*, 155, pp. 185–205.

González-Víllora, S. *et al.* (2015) 'Review of the tactical evaluation tools for youth players, assessing the tactics in team sports: football', *Springerplus*, 4(1), pp. 1–17.

Hassan, I.H.I. (2017) 'The effect of core stability training on dynamic balance and smash stroke performance in badminton players', *International Journal of Sports Science and Physical Education*, 2(3), pp. 44–52.

Haydarkulovich, K.H. (2022) 'Psychological aspects of training young basketball players', *Web of Scientist: International Scientific Research Journal*, 3(1), pp. 397–405.

Latif, R.A. *et al.* (2022) 'Relationship between Cardiovascular Endurance and Mental Toughness among Academy Mokhtar Dahari (AMD) Football Players.', *Asian Journal of University Education*, 18(1), pp. 166–178.

Launder, A. and Piltz, W. (2013) *Play practice: The games approach to teaching and coaching sports*. Human Kinetics.

Lazzaro, N. (2009) 'Why we play: affect and the fun of games', *Human-computer interaction: Designing for diverse users and domains*, 155, pp. 679–700.

Lees, A. (2003) 'Science and the major racket sports: a review', *Journal of sports sciences*, 21(9), pp. 707–732.

Le Mansec, Y. *et al.* (2020) 'Impaired performance of the smash stroke in badminton induced by muscle fatigue', *International journal of sports physiology and performance*, 15(1), pp. 52–59.

McPherson, S.L. (2007) 'Tactics: using knowledge to enhance sport performance', in *Developing sport expertise*. Routledge, pp. 177–193.

Phomsoupha, M. and Laffaye, G. (2015) 'The science of badminton: game characteristics, anthropometry, physiology, visual fitness and biomechanics', *Sports medicine*, 45, pp. 473–495.

Plant, E.A. *et al.* (2005) 'Why study time does not predict grade point average across college students: Implications of deliberate practice for academic performance', *Contemporary educational psychology*, 30(1), pp. 96–116.

Popovych, I.S. *et al.* (2019) 'The research of the mental states of expecting a victory in men mini-football teams'.

Roca, A. *et al.* (2011) 'Identifying the processes underpinning anticipation and decision-making in a dynamic time-constrained task', *Cognitive processing*, 12, pp. 301–310.

Rousmaniere, T. *et al.* (2017) *The cycle of excellence: Using deliberate practice to improve supervision and training*. John Wiley & Sons.

Schläppi-Lienhard, O. and Hossner, E.-J. (2015) 'Decision making in beach volleyball defense: Crucial factors derived from interviews with top-level experts', *Psychology of sport and exercise*, 16, pp. 60–73.

Williams, A.M. *et al.* (2011) 'Perceptual-cognitive expertise in sport and its acquisition: Implications for applied cognitive psychology', *Applied Cognitive Psychology*, 25(3), pp. 432–442.

Williams, G.R., Farmer, L.C. and Manwaring, M. (2008) 'New technology meets an old teaching challenge: Using digital video recordings, annotation software, and deliberate practice techniques to improve student negotiation skills', *Negotiation Journal*, 24(1), pp. 71–87.

Xu, B. (2015) 'The role of physical training in badminton teaching', in *2nd International Conference on Civil, Materials and Environmental Sciences*. Atlantis Press, pp. 285–287.