JUMORA: JURNAL MODERASI OLAHRAGA
E-ISSN: 2797-8761
Volume 6, No. 1, June 2026
DOI: 10.53863/mor.v6i1.1975
Universitas Ma'arif Nahdlatul Ulama Kebumen

Original Article Research

The Effect of Attention Training Techniques on The Attention and Performance of Taekwondo Athletes

Ersa Makhroja[1]*, Komarudin Komarudin[1], Nida'ul Hidayah[1], Geraldi Novian[2]

[1]*Study Program of Sport Coaching Education, Faculty of Sport and Health Education, Universitas Pendidikan Indonesia, Bandung, West Java, Indonesia*

[2]*Study Program of Sport Physical Coaching, Faculty of Sport and Health Education, Universitas Pendidikan Indonesia, Bandung, West Java, Indonesia*

*email corresponding author: komarudin_pko@upi.edu

Received: 04/12/2025 *Revised: 14/12/2025* *Accepted: 24/12/2025*

Abstract

Optimal performance in various fields, such as sports, is highly dependent related to a person's capacity to preserve consistent focus and attentiveness, especially in the psychological aspect.The study seeks to explore and assess the effectiveness generated through attention training techniques on imploving concentration and performance among taekwondo athletes. The study adopted an approach involving one group assessed both prior to and following the treatment was implemented for 10 sessions, scheduled thrice a week, involving 12 taekwondo athletes. A questionnaire derived from the TAIS (The Test of Attentional and Interpersonal Test) containing seven measurement dimensions serves as primary instrument of this study, then the calculation of athlete performance will use medal data before and after treatment, adjusted to the World Taekwondo Federation competition grade. The study's data will be analyzed through SPSS, highlighting a considerable enhacement in taekwondo athletes' performance and focus through the application of attention training techniques from Cirebon. The results demonstrate that attention training techniques produce a meaningful and beneficial impact on both the attention and performance of taekwondo athletes. Further studies are needed to apply this research to a broader and more diverse population and to examine the longer term effects of attention training techniques.

Keywords: Attention, Junior Taekwondo, Performance

How to cite:

Makhroja, E., Komarudin, K., Hidayah, N., & Novian, G. (2025). The Effect of Attention Training Techniques on The Attention and Performance of Taekwondo Athletes. *Jurnal Moderasi Olahraga, 6*(1), 1–15. https://doi.org/10.53863/mor.v6i1.1975

1. INTRODUCTION

The success of taekwondo athletes depends not only on their bodily coordination and

technical proficiency alongside psychological factors that significantly influence performance (Nam et al., 2022). One such factor is attention, or focus, which can help athletes anticipate opponent movements, process information, and respond to stimuli quickly and accurately (Zhang et al., 2022). In taekwondo competitions, success is often determined by an athlete's ability to focus and ignore distractions around the match (Kamali et al., 2023). Some elite athletes tend to be able to maintain their attention during competition situations, while regional athletes tend to struggle (Murray & Hunfalvay, 2017). Therefore, being able to maintain attention during competition situations will impact athlete performance. This ability to maintain attention is essential for taekwondo athletes (Kadri et al., 2019), especially athletes in Cirebon Regency, to achieve maximum performance and improve their performance. Attention is a crucial factor in sports performance (Failing & Theeuwes, 2018). Therefore, the ability to maintain focus is a fundamental skill for athletes (Febrianty et al., 2021; Verrier, 2017). However, coaches often overlook the basic psychological aspects that athletes should possess, particularly focus (M. P. Komarudin et al., 2024).

The author conducted a review of various literature studies to examine the issues outlined above. In a study titled "Martial Arts as a Tool for Enhancing Attention and Executive Function," Venkateswar Pujari reviewed that martial arts training, including taekwondo, by combining mindfulness and focus techniques can improve attentional control and reduce mental and attentional distractions. (Poojar et al., 2017). And the coach's leadership style can also have an effect on improving athlete performance (Novian & Noors, 2020). The author found that athletes in large cities have undergone special psychological training to improve their focus (Zhuoyuan, 2021). The author rarely found special psychological training in small cities like the Momentum Club in Cirebon Regency. Because small areas, particularly Cirebon Regency, have limited access to specialized attention tracking devices (MOTs), there tends to be little or no attention paid to the psychological aspects of athletes, which should be a fundamental aspect for coaches to teach their athletes. This is because taekwondo, especially in Cirebon Regency, still lacks specific attention to athlete psychology, which should be a fundamental aspect for coaches to teach their athletes (Amalia & Ribhan, 2025; Weinberg et al., 2018). Consequently, taekwondo athletes in the Momentum Club in Cirebon Regency still tend to have low attention spans and are easily distracted by the atmosphere and match situations. This research is important based on several factors. One of them is improving the ability to maintain attention, which is expected to contribute to improved performance of taekwondo athletes (Appelbaum & Erickson, 2018) in Cirebon Regency. Athletes have focused more on physical fitness and technique, while training for attention skills tends to be neglected or even rarely practiced (Zhuravleva et al., 2022).

This investigation intends to offer substantial data beneficial to taekwondo coaching staff and organizational leaders in Cirebon Regency on how to better train athletes' psychological aspects, especially their attentional focus skills. Therefore, this research provides a novel understanding of attention focus, particularly in the world of sports, particularly the martial art of taekwondo. This is because the study conducted by Frode Moen & Kristian Firing, entitled "Experiences from Attention Training Techniques among Athletes," only provides implications for the use of attention training techniques, which have been proven to be effective in Norway (Moen Frode & Firing Kristian, 2015). This research specifically examined the role of attention focus when trained with attention training techniques. It must be recognized that a majority of regional competitors face challenges in trying to maintain their focus compared to elite athletes who can consistenly maintain their attention (Oliver et al., 2021).

2. METHOD

The study implements an experimental design intended to measure the influence of given treatment on dependent variabels within regulated circumstances (Mutz & Pemantle, 2015). Experimental research is deliberately conducted, manipulation may involve deliberately providing scenarios or behavioral stimuli to subjects post-intervention to observe resulting effects.

2.1 Participants

The type of population used is a limited population or finite population, the number of which can be identified or calculated with certainty (Ghosh, 2021). A total 47 individuals practicing taekwondo formed the subject group in this investigation athletes from Cirebon Regency registered with the Momentum Club in Cirebon Regency. Based on psychological test data, these taekwondo athletes from Cirebon Regency generally have poor psychological characteristics, particularly in controlling their attention. Therefore, in competitions, their performance, which should have reached the set target, tends to decline due to the lack of mental training provided by their coaches. This study specifically targeted taekwondo athletes from Cirebon Regency because they were the experimental group whose attention changes would be measured after being given attention training techniques. The sample consists of a selected portion that embodies the defining features of the entire population (Rai & Thapa, 2019). The study utilized selective sampling, where subjects were intentionally chosen according to specific considerations set by researcher. The sampling process was conduted by selecting individuals who met the predetermined characteristic set by the researcher. Therefore, the subjects who would be respondents were taekwondo athletes in the fighting or kyorugi category at the Momentum Club in Cirebon Regency with the criteria of active athletes, both female and male athletes, aged 14 to 16 years. Then, 12 active taekwondo athletes from Cirebon Regency were found who met the criteria.

2.2 Research Design

A one-group pre-test-post-test model was utilized in this reaseach, consisting solely of an experimental group with no control participants. The first treatment pre-test was conducted to measure the athletes' attention levels before receiving the treatment. The second treatment post-test was conducted to determine the effects after the athletes had been given the attention training techniques.

2.3 Instruments

A research instrument a tool used to collect information and data, consisting of data sources or data collection by reflecting on the complications arising from the variables under investigation. In this study, the instrument used was a questionnaire. A questionnare serves as a systematic compilation of prompts or assertions given to respondents to collect data (Young, 2015). The type of questionnaire the study employed a fixed-answer questionnare format, where respondents only chose questions or statements that had been provided, and use a direct questionnaire, meaning respondents directly answered about (Usama, Muhammad .D, 2017). The form of the questionnaire used in this study was a graded scale, namely a question or statement followed by columns indicating levels of agreement with the question or statement that had been provided. This questionnaire was filled out using the Google Form application. This investigation employed the Test of Attentional and Interpersonal Style (TAIS) as the core instrument for data collection (Hijazi, 2013). The Test of Attentional and Interpersonal Style (TAIS) serves to

evaluate various attention styles using a framework that includes seven specific dimensions. The seven dimensions include 6 statements in the Broad External Attentional Focus (BET) dimension, 12 statements in the Overloaded by External Stimuli (OET) dimension, 8 statements in the Broad Internal Attentional Focus (BIT) dimension, 9 statements in the Overloaded by Internal Stimuli (OIT) dimension, 12 statements in the Narrow Attentional Focus (NAR) dimension, 15 statements in the Reduced Attentional Focus (RED) dimension, and 19 statements in the Information Processing (INFP) dimension. Athletes will fill out a questionnaire using a likert scale of 1 to 5, which includes the options of "Strongly Disagree" (SDS), "Disagree" (DS), "Neutral" (N), "Agree" (A), "Strongly Agree" (SA). Throgh this rating instrument, athletes convey their degree of concurrence regarding each statement's dimension of The Test of Attentional and Interpersonal Style (TAIS). The Test of Attentional and Interpersonal Style (TAIS) measuring instrument has been proven accurate because its validity and reliability have been tested, presenting validity figures from 0.895 up to 0.931 alongside reliability measured at 0.916. Thus, The Test of Attentional and Interpersonal Style (TAIS) demonstrates strong validity, consistency, and suitability in assessing attention and interpersonal tendencies. Performance assessment in competitive Taekwondo is based on World Taekwondo Ranking (WT) Points, but these raw points need to be normalized to a scale of 0 to 100 for fair comparisons. WT Points earned vary significantly depending on the Tournament Level or Grade, for example, 1st Place in a low-level tournament (G-1) earns only 10.00 WT Points, while in a very high-level tournament (G-8) it can earn 80.00 WT Points. However, after normalization, both 1st Place achievements yield a Score of 100, as the score is calculated as a percentage of the highest points available in that tournament grade. In other words, normalization ensures that a 1st Place achievement at any level is recognized as a maximum performance (a Score of 100), while a lower ranking (e.g., 2nd Place) will receive a proportional score (e.g., 60%) of the highest WT Points, demonstrating relative consistency of performance, regardless of the nominal WT Points earned.

2.4 Procedures

The treatment in this study was attention training techniques. Attention training techniques were administered after the athletes completed a post-test using the Test of Attentional and Interpersonal Style (TAIS) questionnaire. This treatment was conducted for four weeks, with 10 sessions of attention training techniques, three times a week, each lasting 12 minutes (Haukaas et al., 2018). This aligns with earlier empirical discoveries that suggest training should be performed three times a week (Adi, 2016). Over the course of the four-week treatment phase, 10 sessions were conducted three times per week, each lasting approximately 12 minutes. These 12 minutes consisted of mindfulness training techniques, combining the training materials with each other and incorporating the martial art of taekwondo. This research procedure will be implemented in several stages. The research procedure will include initial attention measurement through a pre-test, followed by the administration of attention training techniques to the experimental group. After the treatment period, the taekwondo athletes' attention will be measured again through a post-test, the data of which will be processed using SPSS (Statistical Package for the Social Sciences).

2.5 Data Analysis

To evaluate how Attention Training Techniques impacts athletes' focus, data from pre- and post-test will be examined using SPSS (Statistical Package for the Social Sciences), an analytical platform for hypothesis verification and statistical evaluation (Sudrajat et al., 2024).

Statistical summaries of the collected data will be organized into tables, after which a normality assessement will verify the distribution pattern. Subsequently, a paired t-test will compare pre- and post-treatment attention results, allowing researchers to evaluate the extent to which attention training techniques influence athletes' attention levels and performance outcomes in taekwondo.

3. RESULTS

The results of this study revealed a significant effect of attention training techniques and an increase in performance. This study used SPSS (Statistical Package for the Social Sciences) to perform statistical descriptions, presentations of results, normality tests, and paired samples tests for attention and performance. The reasearchers will process and interpret the data, then present the summarized results within a tabular visualization, illustrated in Table 1 for clarity.

Table 1.

Statistical Description Attention

Dimension		Minimum	Maksimum	Mean	Std. Deviation
BET	Pre-test	1.83	2.67	2.15	.28971
	Post-test	3.33	4.50	3.82	.31369
OET	Pre-test	1.67	2.50	2.15	.25674
	Post-test	3.00	3.67	3.35	.23118
OIT	Pre-test	1.56	2.56	2.05	.27714
	Post-test	3.00	4.11	3.38	.35683
BIT	Pre-test	1.75	2.88	2.20	.37502
	Post-test	3.50	4.38	3.90	.27291
NAR	Pre-test	1.58	2.75	2.25	.30958
	Post-test	3.00	4.33	3.38	.34244
RED	Pre-test	1.67	2.75	2.28	.31633
	Post-test	3.00	4.17	3.44	.35418
INFP	Pre-test	1.95	2.56	2.22	.19136
	Post-test	2.79	3.95	3.21	.37220

Source: Primary Data

Note : BET = Broad External Focus.; OET = Overloaded by External Stimuli ; BIT = Broad Internal Attentional Focus ; OIT = Overloaded by Internal Stimuli ; NAR = Narrow Attentional Focus ; RED = Reduced Attentional Focus ; INFP = Information Processing.

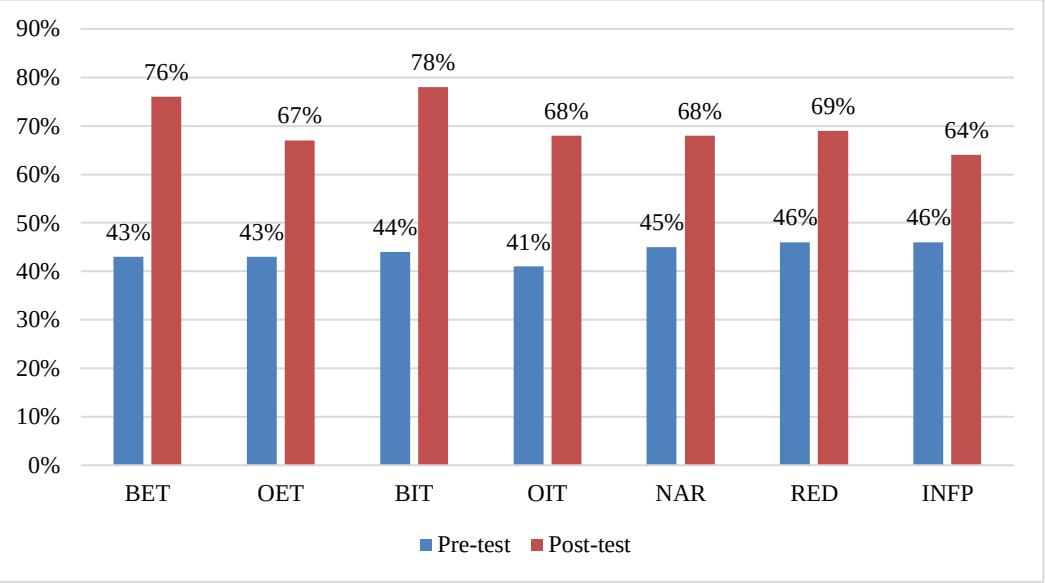
Table 1 provides a coherent overview comparing pre-test and post-test descriptive statistics over seven measured aspects, displaying the range, central tendency, and variability values systematically. The results indicate that there was a consistent average increase in all dimensions after the intervention. A remarkable growth occurred within the BIT score, climbing from 2.20 to 3.90, an similar trends appeared across BET, OET, OIT, NAR, RED and INFP

JUMORA: JURNAL MODERASI OLAHRAGA
E-ISSN: 2797-8761
Volume 6, No. 1, June 2026
DOI: 10.53863/mor.v6i1.1975
Universitas Ma'arif Nahdlatul Ulama Kebumen

categories, whose average results increased from pre-test levels of around 2.05-2.28 to post-test figures ranging between 3.18 and 3.44. Meanwhile, the standard deviation analysis showed variations in data concentration. Although the majority of dimensions showed a decrease in standard deviation, for example in the OIT and BIT dimensions, which indicated a more homogeneous score in the post-test, the INFP dimension actually experienced a substantial increase in standard deviation from .19136 to .57220, indicating the widest distribution of scores in the post-test. These data collectively imply a strong positive impact of the attention training techniques intervention, as it is marked by a significant increase in average scores in all aspects that have been measured. Then the author will visualize the percentage of the results of the 7 dimensions that have been measured and to find out the differences obtained in each dimension in Figure 1 as follows.

Figure 1.

Presentation of Results Attention



Source: Primary Data

Note : BET = Broad External Focus.; OET = Overloaded by External Stimuli ; BIT = Broad Internal Attentional Focus ; OIT = Overloaded by Internal Stimuli ; NAR = Narrow Attentional Focus ; RED = Reduced Attentional Focus ; INFP = Information Processing.

As reflected in Figure 1, a notable shift appears in the BET results, reflecting a progression from 43% at baseline to 76% after post-test, resulting in a with a 33% differential rate. Within the OET scale, scores advanced from 43% at baseline to 67% after testing, reflecting a 24% variance, similarly, the BIT rose from 44% to 78% indicating a 34% growth. The OIT aspect ose notably from 41% in the pre-assessement to 68% in the post-assessement, showing a 27% rise, while the NAR factor also progressed from 45% to 68%, signifying a 23% uplift. Both and INFP categories showed identical progress, with pre-test figures at 46% and post-test results reaching 69%, reflecting a consistent 23% enhancement. Then the author will visualize the statistical description of performance in table 2 below.

JUMORA: JURNAL MODERASI OLAHRAGA
E-ISSN: 2797-8761
Volume 6, No. 1, June 2026
DOI: 10.53863/mor.v6i1.1975
Universitas Ma'arif Nahdlatul Ulama Kebumen

Table 2

Statistical Description Performance

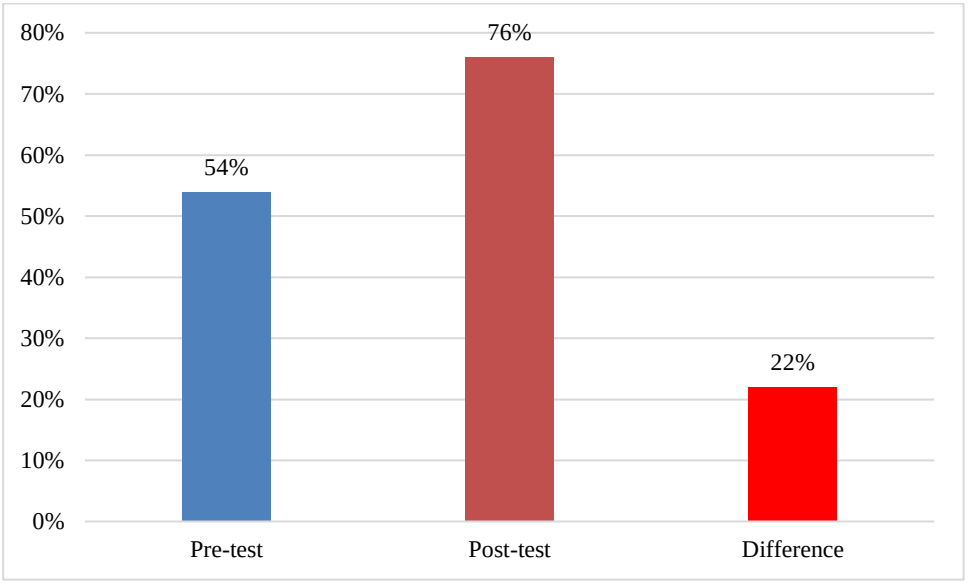
	N	Minimum	Maximum	Mean	Std. Deviation
Pre-Test	12	.00	100.00	54.0000	34.76676
Post-Test	12	36.00	100.00	76.0000	26.42313

Source: Primary Data

In Table 2, the minimum performance value is 0.00 for the pre-test and 36.00 for the post-test. Then, the maximum value for both the pre-test and post-test is 100.00 with a mean pre-test of 54.0000 and a mean post-test of 76.0000. And for the standard deviation for the pre-test, it is 34.76676 and for the post-test, it is 26.42313. And there is an increase in the performance of taekwondo athletes which will be visualized with the percentage in Figure 2 as follows.

Figure 2.

Performance Percentage



Source: Primary Data

In Figure 2, the difference in percentage of athlete performance in the pre-test was 54% and in the post-test was 76%, so there was a 22% increase in athlete performance after attention training techniques treatment was carried out on athletes in Cirebon Regency. After that, the author will conduct a normality test for attention and performance in tables 3 and 4.

JUMORA: JURNAL MODERASI OLAHRAGA
E-ISSN: 2797-8761
Volume 6, No. 1, June 2026
DOI: 10.53863/mor.v6i1.1975
Universitas Ma'arif Nahdlatul Ulama Kebumen

Table 3.

Normality Test Attention

Dimension		Shapiro-Wilk		
		Statistic	df	Sig.
BET	Pre-test	.903	12	.174
	Post-test	.948	12	.603
OET	Pre-test	.919	12	.282
	Post-test	.890	12	.119
OIT	Pre-test	.979	12	.981
	Post-test	.896	12	.122
BIT	Pre-test	.912	12	.229
	Post-test	.964	12	.838
NAR	Pre-test	.956	12	.729
	Post-test	.880	12	.093
RED	Pre-test	.878	12	.084
	Post-test	.919	12	.276
INFP	Pre-test	.964	12	.836
	Post-test	.907	12	.193

Source: Primary Data

Note : BET = Broad External Focus.; OET = Overloaded by External Stimuli ; BIT = Broad Internal Attentional Focus ; OIT = Overloaded by Internal Stimuli ; NAR = Narrow Attentional Focus ; RED = Reduced Attentional Focus ; INFP = Information Processing.

Through the Shapiro-Wilk analysis, researchers assessed whether the seven dimensions' pre- test and post-test data followed a normal pattern, using the rule that Sig. > 0.05 indicates normality. Findings confirm that all results met this threshold, demonstrating that every dataset maintained normal distrimution. The Sig. values range from the lowest in the RED (Reduced Attentional Focus) pre-test with a value of .084 to the highest in the OIT (Overloaded by Internal Stimuli) pre-test dimension with a value of .981. With the fulfillment of the overall normality test in all dimensions, the study applies a parametric analytical technique to interpret the data.

JUMORA: JURNAL MODERASI OLAHRAGA
E-ISSN: 2797-8761
Volume 6, No. 1, June 2026
DOI: 10.53863/mor.v6i1.1975
Universitas Ma'arif Nahdlatul Ulama Kebumen

Table 4.

Normality Test Performance

Item	Shapiro-Wilk		
	Statistic	df	Sig.
Pre-Test	.894	12	.134
Post-Test	.857	12	.098

Source: Primary Data

The normality test on performance proves that the data is normally distributed because the data can be considered normal if the value is Sig. > 0.05. For the pre-test item, the value is .134 and for the post-test, the value is .098. So, it can be concluded that the pre-test and post-test performance data are normally distributed.Then the researcher will conduct a hypothesis test which may be viewed in Table 5 below.

Table 5.

Paired Samples Test Attention

Pre-post test	t	Sig. (2-tailed)
BET	-16.243	.000
OET	-24.472	.000
OIT	-9.687	.000
BIT	-12.435	.000
NAR	-13.251	.000
RED	-10.115	.000
INFP	-9.476	.000

Source: Primary Data

Note : BET = Broad External Focus.; OET = Overloaded by External Stimuli ; BIT = Broad Internal Attentional Focus ; OIT = Overloaded by Internal Stimuli ; NAR = Narrow Attentional Focus ; RED = Reduced Attentional Focus ; INFP = Information Processing.

As illustrated in Table 3, hypothesis testing through the paired samples procedure generated a t-statistic of -16,243 for BET component and-24,472 for the OET component, the OIT dimension of -9,687, the BIT dimension, of -12,435, the NAR dimension of -13,251, the RED dimension of -10,115 and the INFP dimension of -9,476 and with the overall dimensions having a Sig. (2-tailed) value of .000 <0.05 then H0 is rejected. Then, for paired samples test performance, it is visualized in table 6 below.

Table 6

Paired Samples Test Performance

Pre-post test	t	Sig. (2-tailed)
	-2.524	.028

Table 6 shows that the t value for performance is -2.254 and the Sig. (2-tailed) value is .028, which means a Sig. (2-tailed) value of .028 <0.05, then H0 is rejected. The results demonstrate a meaningful contribution of attention training techniques toward improving concentration and performance among taekwondo athletes residing in Cirebon Regency.

4. DISCUSSIONS

The role of psychological skills in sports is very necessary for individual athletes and teams (K. Komarudin et al., 2024) especially for attention. The concept of attention involves consciously directing cognitive focus to pertinent details of an activity and filtering out unnecessary external interference (Lavie, 2017). In the martial art of taekwondo, optimal attention enables athletes to quickly process an opponent's movements, recognize their attack patterns, maintain focus despite fatigue, anxiety, or pressure from the audience, and ensure the accuracy, power, and timing of offense and defense. Without good attention, an athlete will struggle to control basic techniques, which can ultimately lead to decreased performance. Hence, attention training techniques hold essential importance (Moen et al., 2016). They consist of systematic cognitive drills aimed at refining attentional regulation, curbing persistent negative cognition, and separting attention from unrelated apprehensions, thus fostering athletes' intentional engagement with specific performance objectives (Moen et al., 2016; Wilson & Eysenck, 2025). By using this intervention, it is hoped that taekwondo athletes can minimize technical errors caused by lack of focus and enable them to achieve maximum results in the competition arena. This investigation intends to contribute verified academic proof emphasizing the essential role of psychological development, maily attention training techniques, as an integral aspect of taekwondo athletes' regular training practices.

A study titled "Martial Arts as a Tool for Enhancing Attention and Executive Function," conducted by Venkateswar Pujari, found that martial arts training, including taekwondo, by combining mindfulness and focused attention techniques, can improve attentional control and reduce mental and attentional distractions (Poojar et al., 2017). Therefore, by combining these interventions with attention training techniques, athletes can experience greater performance and psychological improvements, particularly in attention. In addition, Taekwondo intrinsically improves an athlete's strength, muscular endurance, power, and balance (Han & Ju, 2025). The synergy between the physical discipline of Taekwondo and the mental precision gained from mindfulness training produces athletes who are both physically strong and mentally superior, giving them the competitive edge necessary to achieve performance in the arena (K. Komarudin, 2016). The application of Attention Training Techniques directly results in improved athlete performance because it strengthens optical attention control and executive functions, allowing athletes to process critical information and make decisions more quickly in real-time during match situations (Hijazi, 2013). This increased focus improves accuracy and precision in technical execution, while ensuring athletes can maintain sustained attention throughout the match, reducing errors triggered by mental distractions (Rahimi et al., 2022). Psychologically, mastering attention control gives athletes a greater sense of control over themselves under pressure, significantly increasing self-confidence and facilitating emotional regulation (Guo et al., 2025; K. Komarudin, 2016). As a result, athletes not only perform better technically, but also are calmer, more focused, and able to adapt quickly to changes in opponent tactics, which are key to achieving consistent peak performance (Goldstein, 2025; Qiu et al., 2018). It was furtherdeterined that through employing these techniques, the results obtained improved taekwondo athlete

performance, because performance encompasses not only physical aspects, such as strength, speed, and endurance, but also mental factors (Habay et al., 2021).

According to the data obtained from investigation, the results revealed an exceedingly significant increase in the performance of Taekwondo athletes from Cirebon Regency after the application of Attention Training Techniques. Before the Pre-test intervention, athlete performance was at 49%. This figure reflects the great potential for development in aspects of focus, decision-making, and technical execution during the match. However, the post-intervention measurement Post-test showed a significant performance of up to 76%. This 22% increase clearly indicates that Attention Training Techniques is an effective intervention and directly contributes to improving the quality of athletes' competitive performance. This improvement proves that attention training successfully sharpens athletes' ability to maintain sustained attention focus under pressure, reduces errors caused by distractions, and collectively increases technical precision and cognitive efficiency, which are essential for achieving optimal performance in competitive sports (Zhu et al., 2025). Attention training techniques train athletes in sustained attention to maintain focus on a task for extended periods, which is crucial in dynamic, long-duration taekwondo matches (Mathunjwa, 2019). It helps athletes filter out environmental distractions, or spectator pressure, allowing them to prioritize relevant stimuli such as opponent movements or coach instructions and ignore irrelevant ones, thus allowing athletes to be more selective in their attention (Moran & Toner, 2018). Taekwondo athletes must divide their attention between defense, attack, and distance assessment (Maloney et al., 2021). The Attention Training Technique improves cognitive efficiency in managing these multiple tasks simultaneously (Sung et al., 2023). This study validates the effectiveness of attention training techniques in Indonesian sports, specifically taekwondo, dispelling the notion that advanced psychological interventions are only suitable for elite international athletes. These results demonstrate that with appropriate psychological intervention, local athletes no longer need to experience a mental lag compared to athletes from more advanced training centers. The implementation of this attention training techniques training program is expected to serve as a model for other regional taekwondo clubs and organizations in Indonesia to seriously incorporate psychological aspects as an integral component of their daily training curriculum.

Thus, the research results obtained show significant results, where providing attention training techniques treatment can improve the attention and performance of taekwondo athletes in Cirebon Regency. The author also found that attention training techniques treatment is currently only used for foreign athletes and is new to Indonesia, involving psychological aspects. And it is hoped that this training program can help local athletes achieve improvements in attention and performance through this attention training techniques program. Thus, there is no longer any lag found for local athletes.

5. CONCLUSIONS

This treatment has proven effective in small-scale settings because it is more flexible and easier to access and understand for both athletes and coaches. Through structured training tailored to the athletes' needs, this attention training technique treatment can provide improvements in psychological aspects both in and out of competition, thereby enhancing individual athlete performance. These results demonstrate that an optimal training approach can significantly contribute to improving psychological aspects, particularly attention and performance, in taekwondo athletes. This study provides practical implications for coaches in developing more

targeted and effective training programs, particularly those focused on the psychological aspect of attention. It is expected that athletes in Cirebon Regency will see an improvement in their ability to maintain attention, which can impact athlete performance. Therefore, this study can be considered by coaches to pay more attention to the psychological aspect as a supporting factor for athlete success. The outcomes a meaningfull advancement in both focus and performance among taekwondo competitors. Thus, it is anticipated that this work will function as a valuable framework and educational refrence for athletes, mentors, sholars, and the general audience concerning psychological training methodologies. It is also hoped that readers of this study will understand and be willing to develop a model of attention training techniques, which is still little known. It is hoped that further research will develop a model of attention training techniques specifically designed for attention aspects, and more specifically explore attention, as well as compare the attention levels of male and female athletes.

Acknowledgment

With deep respect, the author conveys profound thanks to the Indonesian University of Education (UPI) and Sports Coaching Education Study Program for their support and supervision, as well as to all mentors and collaborators whose involvement made this research possible.

REFERENCES

Adi, S. (2016). Mental Atlet Dalam Mencapai Prestasi Olahraga Secara Maksimal. *Prosiding Seminar Nasional Peran Pendidikan Jasmani Dalam Menyangga Interdisipliner Ilmu Olahraga*, 143–153. https://core.ac.uk/download/pdf/267024223.pdf

Amalia, N. T., & Ribhan, R. (2025). The Influence of Knowledge Sharing and Self-Efficacy on the Performance of Indonesian Competitive Taekwondo Athletes. *International Journal Of Education, Social Studies, And Management (IJESSM)*, *5*(2), 937–948. https://doi.org/10.52121/ijessm.v5i2.814

Appelbaum, L. G., & Erickson, G. (2018). Sports vision training: A review of the state-of-the-art in digital training techniques. *International Review of Sport and Exercise Psychology*, *11*(1), 160–189. https://doi.org/10.1080/1750984X.2016.1266376

Failing, M., & Theeuwes, J. (2018). Selection history: How reward modulates selectivity of visual attention. *Psychonomic Bulletin & Review*, *25*(2), 514–538. https://link.springer.com/article/10.3758/s13423-017-1380-y

Febrianty, M. F., Purnamasari, I., & Novian, G. (2021). Analysis of psychological aspects of taekwondo athletes in training phase. *ACTIVE: Journal of Physical Education, Sport, Health and Recreation*, *10*(3), 113–120.

Ghosh, M. (2021). *Bayesian methods for finite population sampling*. Routledge. https://doi.org/10.1201/9781315138169

Goldstein, M. R. (2025). *Mindfulness for Athletes: A Comprehensive Guide to Peak Performance and Inner Peace*. Mason Ronald Goldstein.

Guo, C., Chen, F., & Wang, Y. (2025). The Psychological Impact of Competitive Sports Participation on Adolescent Athletes: an Analysis of Coping Mechanisms and Performance Outcomes. *Journal of Rational-Emotive & Cognitive-Behavior Therapy*, *43*(2), 24. https://link.springer.com/article/10.1007/s10942-025-00587-0

Habay, J., Van Cutsem, J., Verschueren, J., De Bock, S., Proost, M., De Wachter, J., Tassignon, B., Meeusen, R., & Roelands, B. (2021). Mental fatigue and sport-specific psychomotor performance: a systematic review. *Sports Medicine*, *51*(7), 1527–1548. https://link.springer.com/article/10.1007/s40279-021-01429-6

Han, Z., & Ju, H. (2025). Effects of Taekwondo intervention on balance ability: A meta-analysis and systematic review. *PloS One*, *20*(2), e0317844. https://doi.org/10.1371/journal.pone.0317844

Haukaas, R. B., Gjerde, I. B., Varting, G., Hallan, H. E., & Solem, S. (2018). A randomized controlled trial comparing the Attention Training Technique and Mindful Self-Compassion for students with symptoms of depression and anxiety. *Frontiers in Psychology*, *9*(MAY). https://doi.org/10.3389/fpsyg.2018.00827

Hijazi, M. M. K. (2013). Attention, visual perception and their relationship to sport performance in fencing. *Journal of Human Kinetics*, *39*, 195. https://doi.org/10.2478/hukin-2013-0082

Kadri, A., Slimani, M., Bragazzi, N. L., Tod, D., & Azaiez, F. (2019). Effect of taekwondo practice on cognitive function in adolescents with attention deficit hyperactivity disorder. *International Journal of Environmental Research and Public Health*, *16*(2), 204. https://doi.org/10.3390/ijerph16020204

Kamali, A.-M., Ijadi, M., Keshtkarhesamabadi, B., Kazemiha, M., Mahmoudi, R., Roozbehi, A., & Nami, M. (2023). A dual-mode neurostimulation approach to enhance athletic performance outcome in experienced taekwondo practitioners. *Scientific Reports*, *13*(1), 251. https://www.nature.com/articles/s41598-022-26610-3

Komarudin, K., Rismayadi, A., Saputra, M. Y., Novian, G., Lai, X. Q., Juliantine, T., & Tajri, A. A. (2024). Psychological Skill of University Basketball Athletes in Each Playing Position in Indonesia. *International Journal of Disabilities Sports and Health Sciences*, *7*(July), 1098–1105. https://doi.org/10.33438/ijdshs.1508145

Komarudin, M. P., Saputra, M. Y., Awwaludin, P. N., Febrianty, M. F., & Novian, G. (2024). *Model Latihan Kognisi dalam Olahraga*. Indonesia Emas Group.

Lavie, N. (2017). Attention, distraction, and cognitive control under load. *Current Directions in Psychological Science*, *19*(3), 143–148. https://doi.org/10.1177/0963721410370295

Maloney, M. A., Renshaw, I., & Farrow, D. (2021). The interpersonal dynamics of taekwondo fighting. *International Journal of Performance Analysis in Sport*, *21*(6), 993–1003. https://doi.org/10.1080/24748668.2021.1968660

Mathunjwa, M. L. (2019). *Physical tests, hormonal and oxidative-stress related biomarkers in intermittent training of Taekwondo athletes*. University of Zululand. https://hdl.handle.net/10530/1773

Moen, F., Firing, K., & Wells, A. (2016). The effects of attention training techniques on stress and performance in sports. *International Journal of Applied Sports Sciences*, *28*(2).

Moen Frode, & Firing Kristian. (2015). Experiences from Attention Training Techniques among Athletes. *The Sport Journal*, 1–18. https://doi.org/10.17682/sportjournal/2015.006

Moran, A., & Toner, J. (2018). Attentional processes in sport and performance. In *Oxford*

Research Encyclopedia of Psychology. https://doi.org/10.1093/acrefore/9780190236557.013.156

Murray, N. P., & Hunfalvay, M. (2017). A comparison of visual search strategies of elite and non-elite tennis players through cluster analysis. *Journal of Sports Sciences*, *35*(3), 241–246. https://doi.org/10.1080/02640414.2016.1161215

Mutz, D. C., & Pemantle, R. (2015). Standards for Experimental Research: Encouraging a Better Understanding of Experimental Methods. *Journal of Experimental Political Science*, *2*(2), 192–215. https://doi.org/10.1017/XPS.2015.4

Nam, J.-H., Kim, E.-J., & Cho, E.-H. (2022). Sport psychological skill factors and scale development for taekwondo athletes. *International Journal of Environmental Research and Public Health*, *19*(6), 3433. https://doi.org/10.3390/ijerph19063433

Novian, G., & Noors, I. P. M. (2020). Hubungan gaya kepemimpinan pelatih dengan prestasi atlet taekwondo. *Gladi: Jurnal Ilmu Keolahragaan*, *11*(02), 151–164. https://doi.org/10.21009/GJIK.112.07

Oliver, A., McCarthy, P. J., & Burns, L. (2021). Teaching athletes to understand their attention is teaching them to concentrate. *Journal of Sport Psychology in Action*, *12*(3), 196–210. https://doi.org/10.1080/21520704.2020.1838980

Poojar, B., Ommurugan, B., Adiga, S., Thomas, H., Sori, R. K., Poojar, B., Hodlur, N., Tilak, A., Korde, R., Gandigawad, P., In, M., Sleep, R., Albino, D., Rats, W., Article, O., Schedule, P., Injury, C. C., Sori, R. K., Poojar, B., … Gandigawad, P. (2017). Martial Arts as a Tool for Enhancing Attention and Executive Function: Implications for Cognitive Behavioral Therapy. *Asian Journal of Pharmaceutical and Clinical Research*, *7*(10), 1–5. https://doi.org/10.4103/jpbs.JPBS

Qiu, F., Pi, Y., Liu, K., Li, X., Zhang, J., & Wu, Y. (2018). Influence of sports expertise level on attention in multiple object tracking. *PeerJ*, *2018*(9), 1–11. https://doi.org/10.7717/peerj.5732

Rahimi, A., Roberts, S. D., Baker, J. R., & Wojtowicz, M. (2022). Attention and executive control in varsity athletes engaging in strategic and static sports. *PloS One*, *17*(4), e0266933. https://doi.org/10.1371/journal.pone.0266933

Rai, N., & Thapa, B. (2019). A study on purposive sampling method in research. *Kathmandu:Kathmandu School of Law*, 1–12. http://stattrek.com/survey-research/sampling-methods.aspx?Tutorial=AP,%0Ahttp://www.academia.edu/28087388

Sudrajat, D., Sahban, M. A., Sulaminingsih, S., Rahayu, P., Utama, I. W. K., & Novianti, R. (2024). Pelatihan Penggunaan Aplikasi Spss Dalam Pengolahan Data Penelitian. *Community Development Journal : Jurnal Pengabdian Masyarakat*, *5*(4 SE-Articles), 6014–6018. http://journal.universitaspahlawan.ac.id/index.php/cdj/article/view/31135

Sung, C.-M., Lee, T.-Y., Chu, H., Liu, D., Lin, H.-C., Pien, L.-C., Jen, H.-J., Lai, Y.-J., Kang, X. L., & Chou, K.-R. (2023). Efficacy of multi-domain cognitive function training on cognitive function, working memory, attention, and coordination in older adults with mild cognitive impairment and mild dementia: A one-year prospective randomised controlled trial. *Journal of Global Health*, *13*, 4069. https://doi.org/10.7189/jogh.13.04069

Usama, Muhammad .D, S. S. (2017). Reference guide on survey research. *Oman Chapter of Arabian Journal of Business and Management Review*, *1*(12), 62–73.

Verrier, E. D. (2017). The elite athlete, the master surgeon. *Journal of the American College of Surgeons*, *224*(3), 225–235. https://doi.org/10.1016/j.jamcollsurg.2016.11.004

Weinberg, R., Freysinger, V., & Mellano, K. (2018). How can coaches build mental toughness? Views from sport psychologists. *Journal of Sport Psychology in Action*, *9*(1), 1–10. https://doi.org/10.1080/21520704.2016.1263981

Wilson, M. R., & Eysenck, M. W. (2025). Sporting performance, pressure, errors and cognition: Attentional control theory: sport. In *An Introduction to Applied Cognitive Psychology* (pp. 359–378). Routledge.

Young, T. J. (2015). Questionnaires and Surveys. *Research Methods in Intercultural Communication*, *December 2015*, 163–180. https://doi.org/10.1002/9781119166283.ch11

Zhang, Z., Piras, A., Chen, C., Kong, B., & Wang, D. (2022). A comparison of perceptual anticipation in combat sports between experts and non-experts: A systematic review and meta-analysis. *Frontiers in Psychology*, *13*, 961960. https://doi.org/10.3389/fpsyg.2022.961960

Zhu, L., Huang, Z., Liao, B., Liew, J. H., Yan, H., Feng, J., & Wang, X. (2025). Dig: Scalable and efficient diffusion models with gated linear attention. *Proceedings of the Computer Vision and Pattern Recognition Conference*, 7664–7674.

Zhuoyuan, Y. (2021). Analysis of public management, psychological work attention, and athletes performance in sport industries. *Revista De Psicología Del Deporte (Journal of Sport Psychology)*, *30*(3), 168–178.

Zhuravleva, T. A., Aiken, C. A., & Partridge, J. A. (2022). Reflections from expert throws coaches on the use of attentional focus cues during training. *Brazilian Journal of Motor Behavior*, *16*(1), 26–35. https://doi.org/10.20338/bjmb.v16i2.255