

THE EFFECT OF CONCENTRATION TRAINING AND IMAGERY TRAINING ON SELF-CONFIDENCE IN DOLLY CHAGI KICKS IN TAEKWONDO ATHLETES

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Abstract. The dollyo chagi kick is one of the kicking techniques in taekwondo that is done by raising the legs and kicking forward, sideways, up, down, and backwards to score points. The purpose of this study is to determine the effect of concentration exercises and image exercises on the confidence of Gema Cita Perkasa taekwondo athletes in doing dollyo chagi kicks. This study uses a quantitative descriptive research design using experimental methods with a two-group pre-test and post-test design. The sample selection in this study used the purposive sampling technique, with group division using the ordinal installation technique. The sample in this study consisted of 16 athletes. The instruments used in this study were questionnaires and interviews. The data analysis method used was normality, homogeneity, reliability, and hypothesis testing with a significance level of α 0.05. Based on the results of the hypothesis test analysis, a significance value (sig. 2-tailed) of 0.650 was obtained, which is greater than 0.05, indicating that there was no effect of concentration training on confidence in dollyo chagi kicks among Gema Cita Perkasa taekwondo athletes. Furthermore, the hypothesis test yielded a significance value (sig. 2-tailed) of 0.652, which is greater than 0.05, indicating that there was no significant effect of image training on confidence in the dollyo chagi kick of the Gema Cita Perkasa taekwondo athlete. Furthermore, the results of the hypothesis test resulted in a significance value (sig. 2-tailed) of 0.975, which is greater than 0.05, indicating that 'there was no significant effect between concentration training and image training on confidence in the dollyo chagi kicks of Gema Cita Perkasa taekwondo athletes.'

Keywords: Dollyo Chagi; Concentration; Image; Taekwondo



INTRODUCTION

Taekwondo is a modern martial art that is rooted in traditional martial arts, and it is also a martial art that uses a hand-held technique, where the core concept of taekwondo is a combination of strength and mental ability (Solissa, 2023). In taekwondo, foot strikes are a commonly used strategy, with targets including the opponent's body and head. It is important for anyone using kicking techniques to pay attention to speed and power. Basic taekwondo techniques such as kicks, blocks, and stances (Ananda Huriah et al., 2024).

Kicking technique is one of the key components in taekwondo that plays an important role in assessing an athlete's performance, both in training and competitions (Kurniawan & Supriyatnak, 2024). Kicking techniques in taekwondo include: apchagi (front push kick), dwichagi (back kick), nareechagi (flying kick), dollyo chagi (circular kick), and others. One of the techniques that is often used in various competitions and training sessions is the dollyo chagi kick technique (Irhamna Yusra, 2020). The dollyo chagi kick is the basic kick and the kick most often used by taekwondo athletes in both attacking and counterattacking attacks. The force of this kick not only comes from the push of the knees but is also strongly supported by the rotation of the waist, which is actually the distribution of strength and body mass (Naila & Akhmad, 2021).

Dollyo chagi is one of the few basic kicks in taekwondo martial arts, as dollyo chagi is the mother of all kicks, with complex kicks formed from dollyo chagi kicks (Peri Sagita et al., 2023). Dollyo chagi is also a kick that is easy to score points during competitions because of the power generated by the kick. Dollyo chagi kicks mainly use the instep but often also use the heel. These kicks generate significant force through initial rotation driven by hip strength, leg rotation, and leg support before taking the kick (Naila & Akhmad, 2021). One of the basic skills that students or athletes must master in taekwondo is the kicking technique, especially the dollyo chagi kick (Gogik & Syafutra, 2023). To improve their dollyo chagi kicking ability, athletes need to have good concentration and visualization skills.

Concentration is the ability to focus on a task without being distracted by external and internal stimuli, while its implementation refers to a broad dimension and focuses on specific tasks (Wijayanto et al., 2021). Concentration is the ability of an individual to focus his attention and thoughts on information that is essential for his or her successful performance in gaming (Raibowo et al., 2023). Players who can manage concentration

well will be able to focus on the game or sport (Isdarianti & Wiyanto, 2024). It is undeniable that the various psychological components of a player will greatly affect their concentration (Aguss & Yuliandra, 2021).

Image training is one of the brain's important cognitive activities in the implementation of movements. Mental imagery is an object, event, or experience of real movement that has been stored in memory and can be imagined or remembered through a series of exercises known as visualization training (Rumpoko et al., 2023). Imagery is the process by which the athlete thinks, such as when imaging, the formation or development of a mental blueprint (movement scheme/program) occurs in the central nervous system regarding the movement skills to be learned (Yani & Bojonegoro, 2023). Imagery exercises are very beneficial for improving athletes' skills, including mastering motor skills in sports, understanding strategies used in competitions, building confidence, improving interpersonal skills, coping with psychological symptoms, improving focus, correcting mistakes, and even speeding up recovery from sports injuries (Abdullah et al., 2024). Mental imagery is a skill that must be developed, involving the visualization of the movements to be performed, which are repeated several times (Babang et al., 2020). Training that utilizes psychological abilities in sports training and also plays an important role in improving athletic, motor and mental abilities is referred to as mental image (Nopiyanto et al., 2022). This study aims to determine the effect of concentration exercises and image exercises on confidence in dollyo chagi kicks among taekwondo athletes in Gema Cita Perkasa (Gogik & Syafutra, 2023).

Based on observations and interviews with athletes and coaches, researchers found several problems, including; many athletes still kick off the target so that the kick results are less than optimal. Athletes tend to be more anxious or less confident if they have not mastered the technique perfectly. Athletes usually feel less confident if they meet opponents who master various kicking techniques more than the athlete themselves. This study aims to determine the effect of concentration training and imagery training on self-confidence in taekwondo athletes' dollyo chagi kicks. This study is important to do because of the lack of studies on self-confidence in taekwondo athletes' dollyo chagi kicks. Based on the description above, the hypothesis proposed in this study is that there is an effect of concentration training and imagery training on self-confidence in taekwondo athletes' dollyo chagi kicks (H_0) and there is no effect of concentration

training and imagery training on self-confidence in taekwondo athletes' dollyo chagi kicks (Ha).

Therefore, this study aims to investigate the effect of concentration training and imagery training on self-confidence in performing dollyo chagi kicks in taekwondo athletes. The findings are expected to provide valuable insights into the psychological preparation of taekwondo athletes, offering practical recommendations for coaches and sport psychologists to integrate mental skills training into regular practice sessions. Ultimately, improving athletes' self-confidence can contribute not only to technical performance but also to competitive readiness and long-term athlete development.

METHOD

This study uses a quantitative descriptive research design with experimental pre-test and post-test methods of two groups. According to Menurut (Sugiyono, 2011) the two-group pre-test-post-test research design paradigm was measured using pre-tests conducted before treatment was administered, which provided more accurate results as it allowed comparisons between pre-treatment and post-treatment conditions, followed by post-tests. The following table shows the pre-test and post-test designs of the two groups.

Table 1. Two-group research design with pre-test and post-test design

Pre-test	Treatment	Post-test
O1	X1 X2	O2

The sample selection in this study used purposive sampling. Purposive sampling is a technique to determine a sample based on specific considerations Menurut (Sugiyono, 2011). The criteria for selecting this sample are athletes who train frequently, athletes aged 10 years and above, and athletes who have achieved a minimum of a yellow belt. The sample in this study consisted of 16 athletes. The grouping technique used is ordinal pairing, where division is based on an experimental procedure to determine the order of rank 1-16. To ensure that each group is balanced, the following subject pairs are used:

Table 2. Ordinal Mounting Technique

Group 1 (Concentration Training)	Group 2 (Image Training)
1	2
4	3

5	6
8	7
9	10
12	11
13	14
16	15

Table 3. Training Program

Days 1&2:
Concentration training (using mindfulness techniques) (2 sets x 3 repetitions)
Imagery training (using imagination) (3 sets x 3 repetitions)
Days 3&4:
Concentration training (using mindfulness techniques) (2 sets x 4 repetitions)
Imagery training (using imagination) (3 sets x 6 repetitions)
Days 5&6:
Concentration training (using mindfulness and visualization techniques) (2 sets x 6 repetitions)
Concentration training (using imagination and scenario training) (3 sets x 9 repetitions)
Days 7&8:
Concentration training (using mindfulness and visualization techniques) (2 sets x 8 repetitions)
Concentration training (using imagination and training scenarios) (3 sets x 12 repetitions)
Days 9&10:
Concentration training (using mindfulness and visualization techniques during a match) (2 sets x 10 repetitions)
Concentration training (using imagination and training scenarios) (3 sets x 15 repetitions)

The instruments used in this study were a questionnaire with a Likert scale and interviews. Before distributing the questionnaire, the researcher tested the questionnaire using a validity test. This validity test measurement used content validity, which is a validity test regarding the extent to which the questionnaire can represent the behavior of the sample as a whole. After testing, the test results were connected using a correlation technique, namely the Pearson Product Moment correlation. Meanwhile, the reliability test used Cronbach's Alpha. After the data was obtained, it was then analyzed using descriptive statistical methods, normality tests, homogeneity tests, and hypothesis tests with a significance level of $\alpha = 0.05$.

RESULTS AND DISCUSSION

1. Statistics Descriptive

Table 4. Concentration training

	N	Coverage	Minimum	Maximum	Mean	Deviation hours
Pre-test concentration	8	49	96	145	118,75	17,401
Post-test concentration	8	47	98	145	122,50	14,842
Valid N (in the direction of the list)	8					

Based on the pretest results for the concentration group, the minimum score was 96, the maximum score was 145, and the average (average) was 118.75, while the posttest results for the concentration group showed a minimum score of 98, a maximum score of 145, and an average (average) of 122.50.

Table 5. Image training

	N	Coverage	Minimum	Maximum	Mean	Deviation hours
Pre-test image	8	49	104	153	126,50	16,292
Post-testing image	8	56	96	152	122,38	19,427
Valid N (in the direction of the list)	8					

Based on the pretest results for the image group, the minimum score was 104, the maximum score was 153, and the average was 126.50, while the posttest results for the image group showed a minimum score of 96, a maximum score of 152, and an average of 122.38.

Table 6. Concentration training and image training

	N	Coverage	Minimum	Maximum	Mean	Deviation hours
Pre-test concentration and image	16	57	96	153	122,62	16,769
Post-test concentration and image	16	56	96	152	122,44	16,701
Valid N (in the direction of the list)	16					

Based on the results of the pretest for the concentration and image group, the minimum score was 96, the maximum score was 153, and the average was 122.62, while the posttest results for the concentration and image group showed a minimum score of 96, a maximum score of 152, and an average of 122.44.

2. Normality Test

Table 7. Normality test for concentration exercises

Kolmogorov-Smirnova			Shapiro-Wilk		
Statistics	Df	Itself.	Statistics	Df	Itself.

Pre-test concentration	,133	8	,200*	,957	8	,780
Post-test concentration	,157	8	,200*	,984	8	,980

Based on the results of the normality test using the Shapiro-Wilk test in the table above, the significant value of the significant column of the data value from the concentration (pre-test) result is 0.780 and the concentration (post-test) is 0.980. Since the significance value of the pre-test and post-test results above is > 0.05 , it can be said that the confidence concentration exercise on the dollyo chagi kick of the Gema Cita Perkasa taekwondo athlete is usually distributed.

Table 8. Normality test of image training

	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistics	Df	Itself.	Statistics	Df	Itself.
Pre-test image	,165	8	,200*	,961	8	,817
Post-testing image	,185	8	,200*	,957	8	,783

Based on the results of the normality test using the Shapiro-Wilk test in the table above, the significant value of the significant data column from the results of the Imagery (Pre-test) is 0.871 and (post-test) Imagery is 0.783. Since the significance value of the pre-test and post-test results above is > 0.05 , it can be said that the image of confidence training on the dollyo chagi kick of the Gema Cita Perkasa taekwondo athlete is usually distributed.

Table 9. Normality test of concentration training and image training

	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistics	Df	Itself.	Statistics	Df	Itself.
Concentration and imagery	,096	16	,200*	,970	16	,840
Concentration and imagery	,103	16	,200*	,967	16	,794

Based on the results of the normality test using the Shapiro-Wilk test in the table above, the significant value in the significant data column of the results of the concentration training and image training was 0.840, (post-test) concentration training and image training was 0.794. Since the significance value for both exercise groups was greater than 0.05, it can be concluded that the concentration and imaging training groups had a normal distribution in terms of confidence in the dollyo chagi kicks of the Gema Cita Perkasa taekwondo athletes.

3. Homogeneity Test

Table 10. Homogeneity test

	Statistics Levene	df1	DF2	Itself.
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Result	Based on Average	,949	1	14	,347
	By Median	,845	1	14	,374
	Based on Median and with adjusted df	,845	1	13,524	,374
	Based on the trimmed average	,948	1	14	,347

Based on the results of the homogeneity test using the Levene Statistics in the table above, the data obtained, namely the sig value (based on the mean) is 0.347. Since the significance value of the two groups > 0.05 , it can be said that the concentration and image groups are homogeneously distributed.

4. Uji Hypothesis

Table 11. Hypothesis tests for concentration exercises

		Levene Test for Equivalence of Variance			t-test for Facility Equity			
		F	Itself.	t	Df	Sig. (2 Oaks)	Average Difference	Std. Error Difference
Result	The same variance is assumed	,283	,603	-,464	14	,650	-3,750	8,086
	Equal variance is not assumed			-,464	13,660	,650	-3,750	8,086

Based on the results of the hypothesis test in the table above, the significance value (sig.2-tailed) is 0.650. Because the significance value was > 0.05 , H_0 was accepted and H_a was rejected, in other words, there was no significant effect of concentration training on the confidence of taekwondo athlete Gema Cita Perkasa in doing dollyo chagi kicks.

Table 12. Hypothesis testing for image training

		Levene Test for Equivalence of Variance			t-test for Facility Equity			
		F	Itself.	t	Df	Sig. (2 Oaks)	Average Difference	Std. Error Difference
Result	The same variance is assumed	,474	,502	,460	14	,652	4,125	8,964
	Equal variance is not assumed			,460	13,588	,653	4,125	8,964

Based on the results of the hypothesis test in the table above, the significance value (sig. 2-tailed) is 0.652. Since the significance value is > 0.05 , H_0 is accepted and H_a is rejected. In other words, there was no significant effect of image training on self-confidence in the dollyo chagi kick of the Gema Cita Perkasa taekwondo athlete.

Table 13. Hypothesis test of concentration training and image training

		Levene Test for Equivalence of Variance		t-test for Facility Equity				
		F	Itself.	t	Df	Sig. (2 Oaks)	Average Difference	Std. Error Difference
Result	The same variance is assumed Equal	,000	,985	,032	30	,975	,188	5,917
	variance is not assumed			,032	30,000	,975	,188	5,917

Based on the results of the hypothesis test in the table above, it can be seen that the significance value (sig.2-tailed) is 0.975. Since the significance value > 0.05 , H_0 is accepted and H_a is rejected. In other words, there was no significant effect between concentration training and image training on confidence in the dollyi chagi kick of Gema Cita Perkasa taekwondo athletes.

DISCUSSION

The results showed that there was no significant effect of concentration exercises and image exercises on confidence in the dollyi chagi kick of the Gema Cita Perkasa taekwondo athlete. This can be seen from the results of the Shapiro-Wilk normality test which has a significance value of 0.780 for the concentration result (pre-test) and 0.980 for the post-test result. Furthermore, the significance value of the image results (pre-test) was 0.871 and the image results (post-test) were 0.783. Meanwhile, the results of the homogeneity test had a significance value of 0.347. Based on the results of hypothesis testing using T-Test (Independent Test) with the help of SPSS 20 for Windows, the results of the hypothesis test analysis obtained a significance value (sig. 2-tailed) of 0.975, which is greater than 0.05. These findings suggest there was no significant intervention in confidence in athletes who performed the dollyi chagi kick.

Taekwondo is a modern martial art that is rooted in traditional martial arts, and it is also a martial art that uses barefoot and handless techniques, where the core concept of taekwondo is a combination of strength and mental abilities (Sovia Wahyuni, 2020). In addition to using barefoot and handless techniques, taekwondo also requires confidence in performing. Athletes must have high confidence as this is the key to performing well and staying at the top of their game, which allows them to give their best effort during the match (Riyan & Aulia, 2020). Confidence is always characterized by high expectations for success. Athletes who have confidence will remain calm and not easily

deceived by opponents, thus maintaining a positive outlook (Riyan & Aulia, 2020). Completing a performance, projecting confidence, thinking confidently, visualizing yourself, where visualization is always applied as a reference to improve the technique and confidence of athletes. In addition to being used as a reference, visualization techniques (imagery) are also useful for improving athletes' skills, including mastering sports motor skills, mastering strategies used in matches, building confidence, improving interpersonal skills and overcoming psychological symptoms, focus, correcting mistakes, and even accelerating recovery from sports injuries (Abdullah et al., 2024). Physical training, which can support kicking techniques, preparation, and the development of discipline in training is considered important because it can help foster more consistent practice and mastery of techniques, which in turn contributes to improved kicking ability. Assessing one's best performance is a component of confidence. Although concentration training theory and image training support the role of mental training in increasing confidence, these findings suggest that other factors, such as consistent training and following the trainer's instructions, also moderate the effects of training in increasing confidence.

CONCLUSION

Based on the results of the analysis of the first hypothesis test, a significance value (sig. 2-tailed) was obtained of 0.650, which is more than 0.05, so that there was no effect of concentration training on confidence in the dollyo chagi kick of the Gema Cita Perkasa taekwondo athlete. The results of the second hypothesis test obtained a significance value (sig. 2-tailed) of 0.652, which is more than 0.05, so that there was no effect of image training on confidence in the dollyo chagi kick of the Gema Cita Perkasa taekwondo athlete. The results of the third hypothesis test obtained a significance value (sig. 2-tailed) of 0.975, which is more than 0.05, thus stating that there was no significant effect between concentration training and image training on confidence in the dollyo chagi kick of taekwondo athlete Gema Cita Perkasa. Based on the results of the research, it can be concluded that concentration exercises and image exercises have not been proven to increase the confidence of Gema Cita Perkasa taekwondo athletes when doing dollyo chagi kicks.

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