

Influence of Weight Training on Straight Hit Capability at Wushu Club Unpatti Athletes

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Abstract

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The aim of this research is to determine whether or not there is an effect of weight training on the straight punch ability of Unpatti wushu club athletes. This type of research is experimental research where the researcher wants to find out the effect of body weight training on the straight punch ability of Unpatti wushu club athletes with a one-group pre-test-post-test design. The results of the research show that the effect of weight training in the form of push-ups, Dips, and pull-ups has been proven to show real effectiveness, meaning that this training is effective in improving the straight punch ability of Unpatti wushu club athletes.

Keywords: Weight training, punching ability, wushu

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INTRODUCTION

Wushu is a branch of sports achievement that has only recently developed in Indonesia since November 10 1992, under the entry of sports figure I. G. K Manila who later became the first General Chair of PBWI, he was the one who brought wushu to Indonesia. Previously, wushu was known as kunthauw and in the world it is known as kung fu, and is a martial art that has a history of thousands of years, and is a Chinese (Chinese) cultural heritage. Wushu actually comes from two words, namely Wu and Shu. Wu can be interpreted as the science of war while Shu means art. So in terms of language, wushu is the science or art of war.

In the development of the sport of wushu, it is a branch of martial arts that is quite tough, where athletes who fight attack and defend each other to compete for value or points from punches, kicks, slams and pushing out of the arena carried out on their opponents, where the sport of wushu itself is divided into two parts, namely taolu (Art or moves) and sanda or sanshou (Fighting). Wushu in Indonesia has actually long been known as kung fu or kunthauw, China has made wushu the most important heritage in traditional Chinese culture. The first Asian Wushu championship was held in Yokohama, Japan, Indonesian athletes won the best performance in the Tai Ji Quan class in the 1988 exhibition, at the first Wushu festival in China, Indonesian athletes won a bronze and the best performance at the Asian II championship in Hong Kong, the best performance title was again won by Indonesian athletes.

In line with this development, wushu is one of the new martial arts sports that has developed in Maluku since October 9 2018, specifically in the sanda number, where the sport of wushu has only just become known among the people of Maluku and was introduced by Prof. Dr. A. Fenanlampir, M.Pd., AIFO and also as the first

chairman of the Maluku Wushu Provincial Pengprov, and with the enthusiasm to ensure that more and more people know about the sport of wushu martial arts among the people of Maluku. There are several activities that are the first and will be held in Maluku, namely the 2018 Wushu Sanda Regional Referee - Jury Training at the Maluku Province Level which will be held on 12-14 November 2018 and also holding the 2018 Wushu Sanda Open Championship for the Senior & Junior Category at the Maluku Province Level which will be held on 15-17 November 2018 at Gor Hotumese Ambon, Maluku province, and the 2019 Maluku provincial level eastern wushu sanda regional championship in the senior & junior category sanda number which was held on 09-11 September 2019 and Maluku as the overall champion in the senior category sanda number & juniors with various different classes.

After that, Maluku wushu took part in the 2019 Wushu Sanda Championship-RI Kemenpora Cup, (qualifying round II PON –XX/2020) (Open wushu sanda championship) which was held in Semarang, Central Java on 29-31 October 2019, and by taking part in the wushu sanda championship The qualifying round in Semarang, Maluku, succeeded in qualifying 8 athletes in the senior category, 2 athletes & 3 athletes in the junior category from the 56 and 60 kg classes. (senior) class 48, 56 and 60 kg (Junior). Maluku wushu qualified 2 athletes in the qualifying round in Semarang. Even though wushu only became known in Maluku in 2018, it is thanks to good guidance and training strategies that Maluku athletes can produce good achievements.

Paying attention to the many agendas of the WI Maluku Provincial Government regarding the implementation of the annual program, there are still many WI Maluku athletes who are missing. Quality, in this case the athlete's physique, regarding the matter in question. The WI Maluku provincial government, in its evaluation, saw that there were still many WI Maluku athletes who were still weak in their skeletal muscles, so weight training was needed so that the physical quality of the athletes could improve.

Weight training to improve straight punch ability in the sport of wushu sanda with the aim of (1). Building and increasing muscle strength, (2). Building and increasing muscle endurance, (3). Builds and increases muscle endurance. Seeing the large influence of weight training, to achieve an ideal straight punch as expected, you need good, regular, directed and systematic coaching, you have to do enough and programmed training with the correct technique. Remembering that the success of an athlete is largely determined by the training methods carried out, including weight training. (Mustaqim 2018), states that weight training is systematic exercise that uses weights as a tool to increase muscle strength, muscle endurance, buildHypertrophy or muscle tightening. Body weight training will be forced to adapt by increasing the muscle tissue being trained, in aerobic training the body will adapt by increasing physiological efficiency which causes an increase in stamina.

Weight training is exercise that is carried out systematically using weights as a tool to increase muscle strength, in order to improve the athlete's physical condition, prevent injury or for health purposes. Dreger (2006), explains that strength training is a biomotor component that is wrong. one supporting factor for an athlete to win the championship. When an athlete does weight training in a programmed and

systematic manner, the results they get will be good and supported by a good mentality, in this case the athlete does not give up easily, gets anxious and so on, and is also supported by good techniques, so the athlete will automatically ready to become a champion in the competition.

Based on my observations during wushu sports training in Unpatti, especially at the Unpatti club level, it is a necessity in improving achievements in the field of sports at the city, provincial and national levels. However, there are still many athletes who have not mastered the basic techniques of wushu. Of the several basic techniques in the sport of wushu, straight punches are one of the techniques that are widely used during matches, but the reality in the field is that many wushu sanda athletes make mistakes when executing straight punches due to a lack of weight training which has an influence on the quality of the straight punches. . In this study, the researcher focused on weight training which is thought to be related to straight punching ability in the sport of wushu sanda, therefore the author wanted to know how much "weight training influences the straight punching ability of wushu club unpatti athletes"

LITERATURE STUDY

The essence of the sport of wushu

Sugiarto et al (1999), quoted by Sepnu Khoirul Iskandar (2015), in (Kurniawan 2018) Chinese (China), wushu means mighty art or art of war. In mainland China (China) wushu is also called *Kuoshu* which means national art because most of the Chinese people are very fanatical in loving this art so that mastering the art can provide a symbol of strength for someone. (Rahmani 2014) the sport of wushu is a martial art that originates from China which means wu means the science of war and shu means art. So wushu means martial arts. (Gunawan 2007) explains that the basic techniques of wushu are very diverse, ranging from punches, kicks, parries, dodges, throws, locks, to jumps.

Wushu is a martial arts sport that is still relatively new in Indonesia. Wushu is the parent organization of Kungfu martial arts sports. Just like FORKI for Karate, IPSI for Pencak Silat. This sport, which originates from China, has similar movements to the martial art of Karate, which emphasizes punches and kicks, as well as parrying movements. Although the movements in kung fu are more fluid and not monotonous. Several movements in kung fu also emphasize pushing, sweeping, feinting and throwing, and pushing. (Sugiyono 2009). (Bhyantari and I Made Muliarta 2016) as a sport, wushu has two disciplines, namely Taulo (stances) and Sanda or Sanshou (fighting). The taulo category places more emphasis on movement patterns (choreography) which are judged based on certain rules. Each movement is judged based on accuracy, power, and speed. In taulo there are moves that use bare hands and weapons. Taulo emphasizes speed, agility, nimbleness, accuracy and flexibility. This style focuses on kicks, strong and hard punches, fast movements, beautiful jumping and spinning techniques. The sanda/Sanshou category is a type of free fighting (Combat sport), often equated with other combat sports such as Muaythai, Taekwondo and Kickboxing.

The essence of the straight punch ability

Straight punches (tsuki) in wushu are done using several parts of the hand. Can be with one front fist (Seiken), One hinge joint fist (*Iponken*), fingertips (*nukite*), and others. (Symbolon 2013)

A straight punch is an attack that uses the arm with the fist clenched, the trajectory is straight forward, with the top, middle and bottom target points. (Lubis 2013).

A straight punch is a straight punch like a boxing punch, this punch is aimed forward, the hand is clenched into a fist and the other hand covers or protects the chest. (Erwin Setyo Kriswanto 2018).

A straight punch is an attack that uses the arm with the fist clenched, the trajectory is straight forward, with the top, middle and bottom target points. Because punches are really needed in close-range competitions, if they are done with straight, precise and not weak movements and in the short term, an athlete can get a good score. (Muhamar Kodafi Putra and Yusradinafi 2021).

To be able to throw a Medicine Ball, it must be done a long distance. Strong arm muscle power, with this medicine ball you will strengthen the muscles needed for throwing to produce strong arm muscle power. So it is necessary to provide a training program that is carried out in a programmed manner and continues with appropriate training methods. One form of exercise that can increase appropriate arm muscle power is the Medicine Ball Throw exercise. The benefit of medicine ball throw training is to increase arm muscle power which is balanced between the right arm and left arm so that when you make a straight punch, the punch is strong and not weak. (Purnomo (2013)

The Essence of Exercise

Weight training is exercise using weights to increase a person's ability to exert force with the aim of increasing strength, muscle endurance, athlete performance or a combination of these goals. Weight training is planned and structured exercise using appropriate loads and gradually with the aim of making muscles develop stronger (Baechle, T. R. and Earle 2012)

Training is a systematic sporting activity over a long period of time, increased gradually and individually, aimed at forming a human whose physiological and psychological functions are to meet the demands of the task (Bompa.O 1994).

Bompa in Bafirman (2013), "Training is a systematic sporting activity over a long period of time, increased progressively and individually which leads to the characteristics of human function and psychology to achieve predetermined targets."

According to Tegartia (2009) in (Fika 2016) training is a systematic process that is repeated over and over again, consistently while always providing increasing loads. The main goal of training is maximum performance in addition to health and physical fitness for athletes.

In the world of sports, training is an iterative process, increasing practice can increase the potential for achieving maximum performance. For athletes this means a long period of training which can condition the body and mind for a particular competition (Bompa 2000)

The Essence of Body Weight Training

Body weight training ([English: bodyweight workouts](#)) is [strength training](#) which utilizes the individual's body weight and [gravity](#). In fact, body weight training with [weight training](#) are the same, but the difference is the different training models and training variations. Bodyweight exercises use simple skills such as pulling, pushing, twisting, balancing, and bending. (Werner 2010), argues that weight training is a program designed to increase muscle strength and endurance through a series of progressive weight training exercises that overload the muscular system and cause physiological development.

Dreger (Suharjana, 2013), stated that weight training is systematic exercise that uses weights as a tool to increase muscle strength to achieve goals such as improving the athlete's physical condition, preventing injury or for health purposes. The main goal of weight training is to improve overall levels of strength and fitness.

The weight of the load or training intensity refers to the period or size of the weight of the load used to develop muscle capacity. To determine the training intensity that will be used for training for each repetition, it can be determined in two ways, namely: 1) based on the number of repetitions that must be lifted (Repetition Maximum/RM) 2) based on the percentage of the maximum load that can be lifted in one effort (One Repetition Maximum/1RM), (Baechle and Groves, 1997)

RESEARCH METHODS

Research design

This type of research is experimental research where the researcher wants to find out the effect of body weight training on the straight punch ability of Wushu Club Unpatti athletes with a research design. *one grup pre-test-post-test design*.

Pretest	Treatment	Posttest
T ₀	X	T ₁

Gambar 1. one grup pre-test-post-test design. (Minister 2014)

Information :

T₀ = initial test

X = treatment

T₁ = final test

Place and time of research

Research location, Gor Hotumesse, Pattimura University. Research time after obtaining a research permit from the Unpatti teaching and education faculty.

Research variable

In this research there are two interrelated variables, namely:

1. The independent variable is weight training with body weight symbolized by X, with indicators namely: a. *Push Up*, (b) *Pull Up* ,(c) *Dips*.
2. The dependent variable is the ability to hit straight *Jab* and *straight* which is symbolized by the Y indicator, a test of hitting ability.

Population and Sample

The population is research motorcycle taxis (Suharismi Arikunto, 1996). From this definition, the population used in this research is male Wushu Club Unpatti athletes, totaling 25 people who are the sample in this research. Considering that the population is easy to reach, this research was conducted on the population.

RESULTS AND DISCUSSION

Data Description

This research aims to find out whether or not there is an effect of weight training on straight punching ability in Wushu Club Unpatti athletes. Obtained analysis includes initial test data (pre test) and final test (post test) of the effect of straight punch training in Wushu Club Unpatti athletes.

Table 1. Raw Data on Straight Hit Ability

No	Pre Test (X)	Post Test (Y)	Difference (D)	NO	Pre Test (X)	Post Test (Y)	Difference (D)
1	128	130	-2	14	119	118	1
2	116	119	-3	15	136	134	2
3	123	127	-4	16	124	122	2
4	109	111	-2	17	124	126	-2
5	131	133	-2	18	115	117	-2
6	128	131	-3	19	132	131	1
7	138	141	-3	20	134	135	-1
8	134	134	0	21	126	127	-1
9	128	131	-3	22	129	130	-1
10	115	115	0	23	120	122	-2
11	135	134	1	24	127	129	-2
12	121	123	-2	25	128	130	-2
13	133	134	-1	Amount	ΣX=3153	ΣX=3184	ΣD=-31

Hypothesis Tester

Based on table 1, calculations are carried out to obtain H_0 by first preparing a work table or calculation table as can be seen in table 2.

Table 2 Raw Data on Straight Hit Ability

No	Pre Test	Post Test	D= (X-Y)	D2= (X-Y) ²
1	128	130	-2	4
2	116	119	-3	9
3	123	127	-4	16
4	109	111	-2	4
5	131	133	-2	4
6	128	131	-3	9
7	138	141	-3	9
8	134	134	0	0
9	128	131	-3	9
10	115	115	0	0
11	135	134	1	1
12	121	123	-2	4
13	133	134	-1	1
14	119	118	1	1
15	136	134	2	4
16	124	122	2	4
17	124	126	-2	4
18	115	117	-2	4
19	132	131	1	1
20	134	135	-1	1
21	126	127	-1	1
22	129	130	-1	1
23	120	122	-2	4
24	127	129	-2	4
25	128	130	-2	4
N	ΣX=3153	ΣY=3184	ΣD=-31	ΣD²=103

1. Formulation of Statistical Hypothesis
 - Ha : There is an influence of Variable X on Y
 - Ho : There is no influence of Variable X on Y
2. Formulation of Statistical Hypothesis
 - HO : $\mu_x = \mu_y$
 - H1 : $\mu_x \neq \mu_y$
3. Hypothesis Rejection Criteria
 - Accept HO If, $t_{count} > t_{table}$
 - Reject H1 If, $t_{count} < t_{table}$

4. Calculation

Next, the following calculation steps are carried out:

- a. Finding D (*Difference* = difference) between variable I score and variable II score, if we give variable I the symbol X while we give variable II the symbol Y, then: $D = X - Y$. thus $D = 3153 - 3184 = -31$.

- b. Adding D to get $\sum D$. When adding D, the algebraic signs, namely the "plus" and "minus" signs, must be taken into account, meaning that the "plus" and "minus" signs are taken into account in the addition. So $\sum D = -31$

- c. Find the mean of *Difference*, with the formula: $M_D = \frac{\sum D}{n}$

Thus obtaining the mean, namely $M_D = \frac{-31}{25} = -1,24$

- a. Squaring D: after that then add it up to get $\sum D^2$.

Based on table 4.2, $\sum D^2$ is obtained² namely = 103

- b. Find the standard deviation of *difference* (SD_D), with the formula:

$$SD_D = \sqrt{\frac{\sum D^2}{n}}$$

Note $\sum D^2$ obtained from the calculation results in point d, while $\sum D$ is obtained from the calculation results in point b above.

Thus to obtain the standard deviation of *difference* by:

$$SD_D = \sqrt{\frac{103}{25}}$$

$$= \sqrt{4,12}$$

$$= 2,03$$

- c. Find the standard error of the mean difference in scores between variables X and Y using the formula:

$$SE_{MD} = \frac{SD_D}{\sqrt{n}}$$

Thus obtaining the standard error and mean difference that is:

$$SE_{MD} = \frac{2,03}{\sqrt{25}}$$

- d. Looking for the price of T_0 with the formula:

$$t_0 = \frac{M_D}{SE_{MD}}$$

M_D has been known to be -1.24, while $SE_{MD} = 0.328$ so:

$$t_0 = \frac{-1,24}{0,328}$$

$$= -3,780$$

It is. Establish degrees of freedom (*degrees of freedom*) $df/db = N - 1$ The research sample was 25 athletes. The variable whose influence is sought is variable X on Y. Determine the degrees of freedom using the formula $df/db = N - 1$ or $25 - 1 = 24$

- f. Look for the critical value "t" listed in the table. The value of "t" at the significance level $\alpha = 0.05$ and the significance level $\alpha = 0.01$

Based on the table of "t" values, it can be seen that with a df/db of 24, the t value is obtained at a significant level of 0.05% = 1.7108 and 0.01% = 2.4921

- g. Rejection of H_0 if it turns out $t_{count} > t_{table}$ face H_0 rejected.

The rejection criteria for H_0 bila $t > t_{\alpha (df)} = t_{0,05 (df)} = 3.780$ based on t results $t_{count} =$ face $t_{count} > t_{table}$ the result is H_a accepted. The conclusion is that weight training has an influence on the straight punch ability of Unpatti wushu club athletes

- h. Provide an interpretation of " t_0 " that is:

- 1) The simple interpretation is that based on the results of the calculations above, it turns out that variable X (weight training) has an influence on variable Y (ability). This means that training (Brban Exercise) is one of the elements that determines the increase in straight punching ability. Pay attention to the size of $t_{\text{observation}}$ or $t_{\text{count}} = 2.8267$ means the variable influence of training Burden (X) can influence the variable of increasing straight punch ability (Y) which has a positive impact.
- 2) Interpretation using the "t" Value Table with $df = N-1$, namely $= 25-1 = 24$, it turns out that at t_{table} with a df of 24 at a significance level of 0.05% $= 1.7108$ and a significance level of 0.01% $= 2.4921$. Because t_{count} greater than t_{table} at the significance level of 0.05% and 0.01%, the alternative hypothesis is accepted, while the null hypothesis is rejected (Ghozali, 2016) say that If the significance value of the t test is > 0.05 then H_0 is accepted and H_a is rejected. This means that there is no influence between the independent variable and the dependent variable and if the significance value of the t test is < 0.05 then H_0 is rejected and H_a is accepted. This means that there is an influence between the independent variable and the dependent variable. This means that at the significance level of 0.05% and 0.01% there is a significant influence between variable X and Y.

DISCUSSION

Based on the calculation results, it can be seen that $t_{\text{count}} = 3.780$ then consulted with the critical data number t_{table} both at the 0.05% and 0.01% significance levels by first determining the df or db where df or $db = N-1 = 25-1 = 24$. Thus, for the 0.05% significance level, the t value is known $t_{\text{table}} = 1.7108$ while for a significance level of 0.01% the t value is known $t_{\text{table}} = 2.4921$. means that the significance level is 0.05% smaller than t_{count} , and t_{count} greater than the significance level of 0.01% or $t_{\text{table}} 0,05\% < t_{\text{count}} > t_{\text{table}} 0,01\%$ or in other words it can be concluded that $1.7108 < 3,780 > 2,491$. Or $t_{\text{table}} 0,05\% 1,7108 < t_{\text{count}} 3.270 > t_{\text{table}} 0.01\% 2,491$. In addition to the hypothesis with t_{count} .

Based on the hypothesis testing criteria if $t_{\text{count}} > t_{\text{table}}$ then the alternative hypothesis or H_a accepted and conversely rejected the observation hypothesis. Based on the tests above, it can be concluded that weight training is a form of exercise deep load has been proven to show real effectiveness and have a huge impact. Weight training, if done with a training program that is prepared systematically and carried out regularly, will get good results on the straight punching ability of Unpatti wushu club athletes. That means the alternative hypothesis (H_0) is rejected and accepts the alternative hypothesis (H_a).

CONCLUSION

Based on the results of the discussion described in chapter IV, it is known that the t-test formula turns out to be $t_{\text{count}} = 3,780$ and t_{table} for a significant level of 0.05% $= (25-1 = 24) = 1.7108$, and 1% $= 2.491$. Next because $t_{\text{count}} > t_{\text{table}}$ both at the significant level of 0.05% $= 1.711$ and 1% $= 2.491$, therefore H_0 and Accept H_1 rejected means there is an influence of weight training which has an influence on the ability of straight punches of Unpatti wushu club athletes.

Thus it can be concluded that the influence of weight training on the form of exercise *Push Up, Dips, dan Pull Up* It has been proven to show real effectiveness, meaning that this exercise is effective in improving the straight punch ability of Unpatti wushu club athletes.

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