

# Wrestling Arm Throw Technique

## *Waist Flexibility, Arm Strength, and Self-Confidence*

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**Abstract:** This study is aimed at knowing the correlation between waist flexibility, arm strength, and confidence toward the speed of arm throw technique in wrestling. Correlational approach in survey was used as the method of the study. The sample was all wrestler athletes of PELATDA of West Java consisted of 30 people. The independent variables were waist flexibility, arm strength, and confidence; while the dependent variable was the speed of arm throw technique. The data analysis techniques used ANOVA analysis. The findings showed that, first, there was significant correlation between waist flexibility and the speed of arm throw technique in wrestling. Second, there was significant correlation between arm strength and the speed of arm throw technique. Third, there was significant correlation between confidence and the speed of arm throw technique. Fourth, there was significant correlation between waist flexibility, arm strength, confidence, all together, and the speed of arm throw technique. According to the study, it can be concluded that waist flexibility, arm strength, and confidence have significant correlation with the speed of arm slamming in wrestling. Thus, wrestler athletes should have such trainings to increase their waist flexibility, arm strength, and have such high confidence to help increase the speed of arm slamming.

## 1 INTRODUCTION

Which became the dominant aspect in performing the technique during the wrestling match that is the speed of 100% and the next strength, power and muscle endurance are second priority of 97% in doing technics during the match (Saeed, 2014). In addition to having good strength, athletes must have good body coordination is also especially for Freestyle athletes and is required also for Greco Roman in executing techniques so that the technique produces point (Hartmann, 2014). Greco Roman athlete excellence is on the speed, quickness, flexibility and strength of the shoulder better than the Freestyle athlete, But in terms of agility, abdominal muscle strength and leg muscle strength Freestyle athletes far superior than Greco Roman (Mirzaei, 2013).

In wrestling matches 84% - 86% are dominated by a standing position, which is a great advantage if athletes have a good ability to perform techniques at standing position such as slamming arms (Dokmanac, 2016). In wrestling matches there is no significant

difference between the risk of injury to Freestyle and Greco Roman, but if the strength of the athlete is not good then it will not be possible to perform the technique correctly and generate points (Mirzaei, 2011; Yard, 2008). It should be given practice in performing the technique on standing position, as the most powerful technique to generate point is sling arm (Starostra, 2014). The strength of arm muscles, shoulder muscles, waist flexibility and hand grip strength have a positive relationship with success in performing wrestling techniques (Khanbabazadeh, 2016; Taskiran, 2014).

Wrestling sports have very high philosophical values, because in sports wrestling not only exercises physically in terms of pitting strength, but it is also taught about spiritual, intellectual and moral values (Kameas, 2016). In line with the previous opinion that the sport of wrestling requires mental strength that must be in line with the ability of technique, the key to success in doing all the techniques is to have the stability of confidence obtained from the exercise (Vealey, 2009). Many of the psychological factors

that influence the success of doing the technique well in elite athletes such as anxiety control, mental toughness, self-confidence, cognitive and emotional control, and attention, all aspects must be owned by elite athletes in support of performance in the match (Dyke, 2017; Barbas, 2016; Slack, 2015).

In female athletes the tendency of high anxiety and lack of greater confidence that is 72% compared to male athletes of 28% then it required good mental training (Woodman, 2003). In accordance with the research on self-efficacy on performance shows a very significant result so that performance can run better when all negative psychological aspects are discarded and ignored (Treasure, 1996). Of course, to have good psychological aspects need to do mental training well in advance of the match, some mental training, among others: imagery, goal setting, self-talk, and relaxation (Alder, 2016; Vealey, 2009). The high and low anxiety training provided by the trainers in each training session has a significant effect on better performance during the wrestling match (Alder, 2009).

Based on some research results above, psychological factors are crucial in the success of doing techniques, especially on the arm throw technique. Further in this study discusses the relationship of arm muscle strength, flexibility of the waist, and confidence in doing arm throw technique.

## 2 METHOD

Participants is all wrestling athletes of PELATDA of West Java were used as the sample applying total sampling technique. The sample consisted of 30 people; 10 freestyle athletes, 10 greco roman athletes, and 10 freestyle woman athletes. The procedures in this study was held in February, 2015 in which the sample routinely did training since March 2012 until PON of West Java will be held in September 2016. The density of training was 10 times a week having 120 minutes/ session as the duration. Based on that fact, the researcher used correlational approach in survey as the method of the study. The instrument which was used in measuring the variable of arm slamming was direct skill test through video observation. This was done to measure the speed of the arm slamming which was done 3 times and was in its best moment. Furthermore, the variable of waist flexibility was measured by using standing flexibility test, while in measuring the arm strength, continue push up test was used until the sample could not do the push up anymore. Confidence, on the other hand, was measured by close-ended questionnaire.

## 3 RESULTS AND DISCUSSION

Measurement of the success component of arm throw technique to 30 wrestler in PELATDA (West Java) is limited to 3 aspects that are very instrumental in the success of this technique, namely: arm strength and waist flexibility, and self-confidence. The results of the initial and final measurements of these components are described in the following graph:

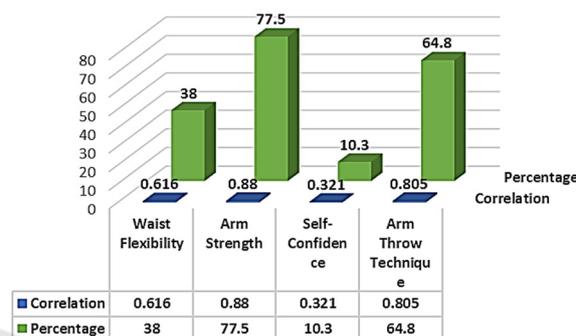


Figure 1 : Correlation between arm strength, waist flexibility and self-confidence in doing arm throw technique.

Based on the graph above can be seen that the results of this research without give treatment of arm muscle strength, waist flexibility and self-confidence in the success of doing arm throw technique to wrestler in PELATDA (West Java) showed significant results.

The findings showed that, first, there was significant correlation between waist flexibility and the speed of arm slamming; the coefficient correlation was 0.616 and the determination index was 38%. Second, there was significant correlation between arm strength and the speed of arm slamming; the coefficient correlation was 0.880 and the determination index was 77.5%. Third, there was significant correlation between confidence and the speed of arm slamming; the coefficient correlation was 0.321 and the determination index was 10.3%. Fourth, there was significant correlation between waist flexibility, arm strength, confidence, all together, and the speed of arm slamming; the coefficient correlation was 0.805 and the determination index was 64.8%. According to the study, it can be concluded that waist flexibility, arm strength, and confidence have significant correlation with the speed of arm slamming in wrestling. Thus, wrestler athletes should have such trainings to increase their waist flexibility, arm strength, and have

such high confidence to help increase arm throw technique.

Based on the results about the relationship between waist flexibility and arm throw speed that there is a significant relationship, where the correlation coefficient of -0.616 with the coefficient of determination  $R^2$  of 0.380. This means that the flexibility of the waist affects 38% of the arm throw speed technique. This is because the speed of the arm throw is a technique that is quite difficult to master, so many wrestlers who have weaknesses while doing arm throw technique, but for those who master the technique of arm throw then this technique can be a mainstay technique that kills the opponent. By having a good waist flexibility then the sleeve speed of the arm will increase. In line with a study that Greco Roman athlete excellence is on the speed, quickness, flexibility and strength of the shoulder better than the Freestyle athlete, But in terms of agility, abdominal muscle strength and leg muscle strength Freestyle athletes far superior than Greco Roman (Mirzaei, 2013). In the style of greco romance is often located in a standing position, and very often occurs arm throw technique so that required a good flexibility in line with the above opinion

Based on the result about the relationship between arm muscle strength with arm throw technique that there is significant relation, where result of correlation coefficient equal to 0,880 with coefficient determination  $R^2$  equal to 0,775. This means the arm muscle strength gives 77.5% effect on the speed of the arm throw technique. By having a good arm muscle strength then the speed of arm throw will increase. This is because at the time of arm throw required a strong pull of the arm so that the muscle strength of the arm very determine the speed in slamming the opponent. In line with a study that revealed that arm muscle strength and hand grip strength greatly affect performance in performing wrestling techniques (Khanbabazadeh, 2016)

Based on the result the relationship between self-confidence and arm throw technique that there is significant relation, where result of correlation coefficient equal to 0,321 with coefficient determination  $R^2$  equal to 0,102. This means confidence gives a 10.2% effect on the speed of the arm throw. By having a good confidence then the speed of arm throw will increase. This is because the sleeve is a technique that is difficult enough to master, so many wrestlers who have weaknesses in arm throw techniques, but for those who master the technique dings then this technique can be a mainstay technique that kills the opponent. Believe yourself here like hesitate when doing arm throw techniques or when

practicing wrestlers do not believe themselves to learn the technique of a complete kick, so it becomes a weakness when competing, this needs to underline how an athlete has the confidence so as to master the technique with a good kick . By doing repetitive exercise the athlete is expected to be able to do a kick with perfect motion automation. In line with the previous opinion that the sport of wrestling requires mental strength that must be in line with the ability of technique, the key to success in doing all the techniques is to have the stability of confidence obtained from the exercise (Vealey, 2009).

The results of data analysis of the relationship between waist flexibility, arm muscle strength and self-confidence with arm throw technique has a correlation coefficient of 0.805 and F count 35.77 states the degree of correlation between waist flexibility, arm muscle strength and self-confidence with arm throw is very high. Based on the results of hypothesis testing on the relationship between the four variables, it has been proven that there is a significant relationship, where the correlation coefficient of 0.805 with the coefficient of determination  $R^2$  of 0.648. This means the flexibility of the waist, arm muscle strength and self-confidence have an effect of 64.8% on the arm throw technique. By having the ability of flexibility of the waist, arm muscle strength and a good confidence then an athlete will be able to do arm throw technique quickly, precisely and perfectly.

## 4 CONCLUSIONS

Waist flexibility and the speed of arm throw technique have significant correlation (really strong), in other words the better the muscle flexibility, tendon and limatchnt in hip joint, the higher the speed of the arm throw technique. There was also significant correlation (really strong) between arm strength and the speed of arm throw technique, which meant that the higher the arm strength, the higher the speed of arm throw technique. There was also significant correlation (low) between confidence and the speed of arm throw technique, in other words, the higher the confidence level, the higher the speed of arm throw technique. It can be concluded that there was significant correlation between waist flexibility, arm strength, and confidence toward the speed of arm throw technique, which meant that the higher the waist flexibility, arm strength, and confidence; the higher the speed of arm throw technique.

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