

THE EFFECT OF LEG STRENGTH AND SPEED TRAINING ON THE RESULTS OF ATHLETIC EXTRACURRICULAR JUMPS, JUMPS MTs.HIDAYATUL MUBTADI'IN

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abstract

Athletics is the oldest sport owned by humans, because its basic skills have been reflected in human life since ancient times, namely walking, running, jumping and throwing. Athletics is a sport that underlies other sports Florensia in maulana (2016). Infectious jumping techniques include 1. Initial running (*apporanc*)2. Hop 3. Step 4. *Jump*. In the jump itself, strength and speed are also needed, so exercises are needed that can support this including *squat jumping*, *skipping* and *running sprints* The type of research used in this study is *quasi-experimental*. According to Suharsimi Arikunto (2010), from the calculation table using SPSS 21 *pre-test* and *post-test* values of significance of 977 and 956. In accordance with the provisions, it can be concluded that the analyzed data is normally distributed. The results of *the Squat jump exercise* can increase the strength of the leg muscles so that they are able to

Keywords: Infection jumping technique, from the calculation table using SPSS 21 to increase the jump distance in the infection jump

INTRODUCTION

The development of sports at this time has developed very rapidly, people have increasingly realized the importance of sports activities, whether it is educational sports, achievement sports, community sports or sports for health. The purpose of exercising is variously in accordance with the activities carried out by Widiastuti in maulana (2016). Sport is a physical activity that is carried out systematically, there are rules and is done intentionally, whose purpose and purpose is to build physical, spiritual and social freshness. Exercise does not only involve the musculoskeletal system but also involves other systems such as the cardiovascular system, respiratory system, excretory system, nervous system and many more. Talking about sports, of course we know that sports aim to achieve achievement because exercising is not only to nourish the body but also to get the highest achievements. One of the sports that is often contested is athletics.

Athletics is one of the oldest sports owned by humans, because its basic skills have been reflected in human life since ancient times, namely walking, running, jumping and throwing. Athletics is a sport that underlies other sports Florensia in maulana (2016). Furthermore, according to Bakar (2019), athletics is an effective physical activity to optimize children's growth and development. The grouping of types of athletic branches, especially in the jump number, one of which is infectious jumping.

Infectious jumping techniques include 1. Initial running (*apporanc*)2. Hop 3 . Step 4. *Jump*. In the jump itself, strength and speed are also needed, so exercises are needed that can support this, including *squat jumping*, *skipping* and *sprint running* .

Based on some of the above backgrounds, the problems that can be formulated are as follows." Is there an effect of leg strength and speed training on the results of jumping infection of extracurricular Athletics students MTs. Hidayatul mubtadi'in Rambipuji-Jember.

The purpose of this study is to find out whether there is an effect of leg strength and speed training on the results of infectious jumping, through *Squat Jump*, *Skipping* and *100 meter Sprint Run* exercises in athletic extracurricular students of MTs Hidayatul Mubtadi'in Rambipuji-Jember

The results of the research are expected to provide benefits for all parties, as for the benefits of the research as follows:

The role of sports as a nation and *character building* machine has been tested, because sports have the function of building the spirit of nationality. Sports are used as a tool to unite the nation, form individual and collective character, and have the potential to dynamize other development sectors. The obligation to contribute to national sports achievements should be our collective responsibility. Sports are part of the nation's character building tools that must be fought.

Sport is basically a need for every human being in life, so that their physical condition and health are maintained and one of the ways to maintain good health Prasetyo (2013) another opinion says that sports is systematic in all activities or efforts that can encourage, improve, and foster the physical and spiritual potentials

of a person as an individual or group as an individual or community group in the form of games, competitions, competitions and intensive physical activities to obtain recreation and Khamdani's victory, in Hidayat, et al (2015).

According to Utami, (2015) Sports is one of the pillars towards the glory of a nation. Sports coaching cannot be done centrally or centrally in an area only. "Moving forward together towards Glory" is a phrase to be followed up. Moving forward together means that each region will be able to provide its best sports achievements in accordance with the carrying capacity of the local region, both ecologically, sociologically and others.

Athletics is one of the physical and health education, which is the components of overall education that prioritize physical activity as well as the development of a healthy life and physical, mental, social and emotional development that is harmonious, harmonious and balanced. According to Rahmat (2015) Athletics comes from the Greek word *Atlon*, *Atlun* which means match or struggle. So Athletics according to the Indonesian encyclopedia means sports matches in athletics. The term athletics comes from the Greek, namely "*Athlon*" which means to race or compete. Another term that contains the word *Athlon* is pentathlon. The term comes from two words, namely "*penta*" which means five and "*Athlon*" which means race. So *pentathlon* means five races or five races. Other terms that use the word athletics are *athletics* (English), *athletiek* (Dutch), *athletique* (France) and *athletik* (German). The term athletics in Indonesia is defined as a sport that competes in the numbers of walking, running, jumping and throwing. Another term that has the same meaning as the term used in Indonesia is *leicgathletik* (German)

Research methods

The type of research used in this study is *quasi experimental*. According to Suharsimi Arikunto (2010), it is stated that experimental research is research that is intended to find out whether there is a consequence of "something" imposed on the subject being investigated or being studied. In other words, experimental research tries to examine whether there is a cause-and-effect relationship, the way is to compare the situation before and after being treated.



Figure 3.1. one- group pre –test and post-tes (Sugiyono, 2013)

O1 : Pre-test (before treatment) O2 : Post test (after treatment) X : treatment

Results and discussion

Data analysis



A. Skipping training data

Table . 4.7 skipping running exercises

Categories	Pre-test		Pos test	
	f	Percentage	f	Percentage

Excellent	0	0%	0	0%
Good	2	40%	4	80%
Satisfying	2	40%	1	20%
Less	1	20%	0	0%

Of the 5 participants who before getting the *Skipping* training treatment, there were 2 participants who got the "Satisfactory" category, 2 participants got the "good" category, 1 participant got the "less" category. And after getting *the skipping training treatment*, there was 1 participant who got the "satisfactory" category and 4 participants got the "good" category.

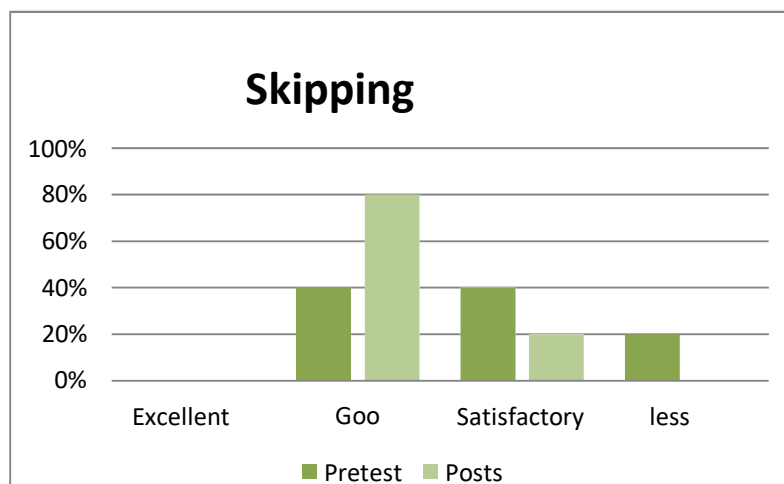


Figure 4.2 Skipping practice diagram

B. Training data 100 m sprint run

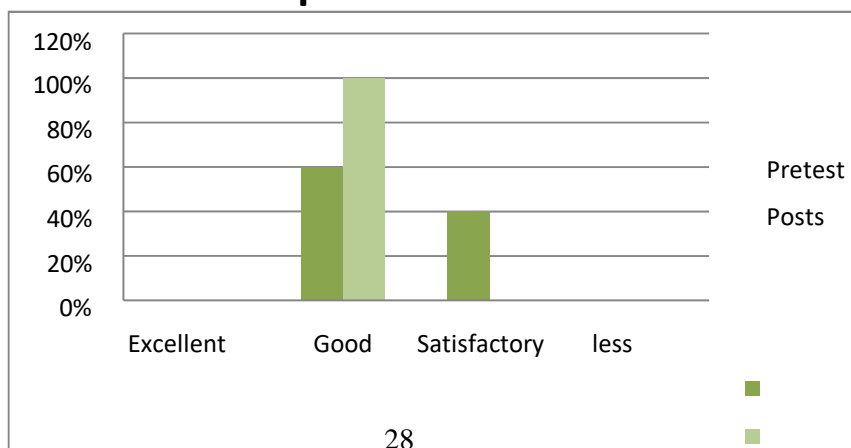
Table 4.8 latithan sprint 100 m.

Categories	Pre-test		Pos test	
	f	Percentage	f	Percentage
Excellent	0	0%	0	0%
Good	3	60%	5	100%
Satisfying	2	40%	0	0%
Less	0	0%	0	0%

Of the 5 participants who before getting the *100m Sprint running training treatment*, 2 participants got the "Satisfactory" category, 3 participants got the "good" category. And after getting the 100m Sprint running training treatment, there were 5 participants who got the "good" category category. Of which there are 2 children in the "satisfactory" category

Figure 4.2 100-meter sprint training diagram

Sprint 100



Discussion

Based on the implementation in the field, the researcher analyzed that leg strength and speed are needed in jumping activities. The strength of the legs is used to support when performing repulsion movements. The speed factor also affects the jump results. Taking a step or start also has a difference between running as fast as possible and running rather slowly has a difference, and also in taking the initial distance because it affects to maximize speed when running. If the two are combined between leg strength and speed, it is likely that the jump distance will be farther.

Based on the description of the data analysis above, it is known that:

1. The results of *the Squat jump exercise* can increase the strength of the leg muscles so that they are able to increase the jump distance in the jump infection. The results of the analysis of t-test data showed a sig 2-tailed value $<$ from the p-value (0.05) so that it can be concluded that there is an effect of squat jump training on the results of the 2019/2020 Mts Hidayatul mubtadiin extracurricular athletic students.
2. The results of *skipping exercises* can increase the strength of the muscles of the front end of the legs so that they are able to increase the jump distance in the jump infection. The results of the analysis of t-test data showed a sig value of 2-tailed $<$ from the p-value (0.05) so that it can be concluded that there is an effect of squat jump exercises on the results of the 2019/2020 Mts Hidayatul mubtadiin extracurricular athletic students.
3. The results of the 100 sprint running exercise can also increase the running speed, so that it can increase the jump distance in the jump. The results of the analysis of t-test data showed a sig 2-tailed value $<$ from the p-value (0.05) so that it can be concluded that there is an effect of squat jump training on the results of the 2019/2020 Mts Hidayatul Mubtadiin Athletics extracurricular students.

Among the three types of speed exercises, the one that has the most influence on the results of jumping is sprint *running*, because there is a thrust due to running speed. This result is in accordance with the statement of Suryani (2016). states that with the ability to run quickly as the initial capital to obtain a strong thrust force on the fulfillment, it produces large explosive power and the jump results can be far.

CONCLUSIONS AND SUGGESTIONS

Conclusion

From the above discussion, it can be concluded that:

1. There was an effect of *jumping exercises* on the results of the infectious jump of extracurricular students of MTs.Hidayatul Mubtadi'in with a value of Sig (2-tiled) 0.000 smaller than 0.005
2. There was an effect of *skipping exercises* on the results of jumping infections of extracurricular athletic students MTs.Hidayatul Mubtadi'in with a Sig (2-tiled) value of 0.003 smaller than 0.005
3. There was an effect of *the 100-meter Sprint running exercise on the results of the jump of the infectious jumping of extracurricular students of MTs.Hidayatul Mubtadi'in with a Sig (2-tiled) value of 0.004 and 0.005*

Suggestions

With reference to the results of the study and the limitations of the research, the researcher suggests:

4. For extracurricular athletic students to practice more actively, don't despair because efforts will not betray results. Especially in the jump of the infecti, the strength and speed are also very influential.
5. For coaches to provide varied and effective training methods for athletes so that their performance can improve better.
6. For future researchers, they should be able to modify other types of exercises and conduct research with a wider sample and population as well as different variables so that the treatment given to increase the jump results in the jump infection itself.

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