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Contribution Of Medicine Ball Throw, Bar Twist, And Lateral Bound Training On Increasing Results Of O'brien Style Bullets In Sma Negeri 2 Athletic Boys In 2022

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Abstract

This study aimed to determine the jointly significant contribution of medicine ball throw, bar twist, and lateral bound exercises to the improvement of O'Brien style shot put results for male athletes at SMA Negeri 2 Kisaran in 2022. The research method used is an experimental method with a research design of one group pre-test and post-test design. The number of samples in this study amounted to 8 people. The research was conducted in the Field of SMA Negeri 2 Kisaran Nusantara VIII Kisaran, Asahan Regency. This study's statistical calculations are requirements analysis, normality, Bartlet test/homogeneity, and regression significance tests. From hypothesis testing, it can be concluded that there is a jointly significant contribution of medicine ball throw, bar twist, and lateral bound exercises to the improvement of the O'Brien style shot put for male athletes at SMA Negeri 2 Kisaran in 2022.

Keywords: Medicine Ball Throw, Bar Twist, Lateral Bound, and Shot Put

Introduction

Sport is a form of physical activity and is widely practiced by various social groups, including children, adolescents, and adults. The movements tend to be fun. Today, humans exercise each with their own goals, Sajoto (1995: 1-2) suggests that there are four primary human goals for exercising, namely: "First, people who exercise are just for fun; second, they participate in sports activities for educational needs; third, they exercise for physical fitness; fourth, they carry out sports activities to achieve a certain achievement. Focusing on the fourth point, achievement sports are sports that develop and nurture athletes in a planned, regular, tiered, and sustainable manner and through competitions to achieve achievements supported by sports science and technology. To achieve maximum performance, many factors influence, one of which is the ability of physical conditions. Harsono (2000: 4) suggests, "If the athlete's physical condition is good, the athlete will quickly master the movement techniques being trained.".

Based on sports goals, especially to achieve achievement goals, athletics, especially the shot put a number, is one of the numbers often contested at the national and international levels, so there needs to be seriousness and good and directed coaching.

This shot put sport can be done by both boys and girls. The success of a person's achievement in sports depends on the quality of his physical abilities. As previously explained, the better a person's physical condition or power, the more excellent the opportunity for achievement, and vice versa.

The implementation of the shot put looks straightforward; although it seems simple, not everyone can do the correct shot put. A person can make a shot put movement if he can do it according to the technique set out in the regulations. In addition to understanding the method, in the shot put, good physical condition is one of the determining factors for athletes to achieve maximum performance and get excellent and distant repulsion results.

It is known that in the shot put, arm muscle power, waist flexibility, and leg muscle power are the main assets that athletes must have to obtain good performance and repulsion, so training for the physical components above should be the primary concern of the coach. In developing the physical condition of a shot put athlete, there are not many choices of training methods used, especially in developing the necessary power.

Based on the observations of researchers in the field on March 15-19, 2021, the shot put results from the athletes of SMA Negeri 2 Kisaran are still not as expected. This impacts the achievements of the male picture put athletes in schools and the area, namely Asahan Regency, which is very little compared to other athletic numbers. The lack of achievement is due to the lack of physical training specifically for athletes in the field numbers (throwing and rejecting) and rarely providing training programs that use tools or media during training. During the observation, the author saw the coach applying several variations of physical exercise to athletes running, jumping, and throwing/rejecting. Especially for the shot put athletes, the trainers use their physical training to equate running and jumping athletes who only focus on improving the physical condition of speed, agility, and endurance. So there is no notable difference between physical training for athletes in track and field competitions even though we obey (Azwar, 2015). "In the implementation of shot put, arm muscle power, waist flexibility, and leg muscle power are the main assets that must be owned by shot put athletes to get good performance and repulsion.

From the results of the author's observations and interviews above, one of the exercises proposed by the author to improve physical condition and athletes

get a new variation of the exercise; the researchers provide practices that contribute to increasing repulsion results in the shot put, especially for arm muscle strength, waist flexibility, and power. The leg muscles of the shot put the athlete at SMA Negeri 2 Kisaran, namely by practicing medicine ball throw, bar twist, and lateral bound.

Based on the description and explanation above, the author concludes that it is necessary to conduct scientific research. This is done because the authors draw a temporary conclusion that the results of the male athlete's shot put by SMA Negeri 2 Kisaran are still lacking and not as expected to achieve achievement. To improve the results of rejection, it is necessary to give exercises that aim to increase arm muscle power, waist flexibility, and leg muscle power. So the author wants to do a study with the title "The contribution of Medicine Ball Throw, Bar Twist and Lateral Bound exercises to the improvement of O'Brien style shot put results in male athletes at SMA Negeri 2 Kisaran in 2022".

Method

From the results of the author's observations and interviews above, one of the exercises proposed by the author to improve physical condition and athletes get a new variation of the exercise; the researchers provide exercises that contribute to increasing repulsion results in the shot put, especially for arm muscle strength, waist flexibility, and power. The leg muscles of the shot put the athlete at SMA Negeri 2 Kisaran, namely by practicing medicine ball throw, bar twist, and lateral bound.

This research was conducted in the field of SMA Negeri 2 Kisaran, Jl. Sitarda Nusantara VIII Kisaran, Asahan Regency. This research was conducted from January 21 to February 24, 2022, for five weeks. With a frequency of exercise 4 times a week according to the training schedule. Practice starts at 16.00 – 18.00 WIB. Implementation is carried out on Monday, Wednesday, Thursday, and Friday. Before starting the exercise, data about the initial ability (pre-test) was first taken and then given training treatment, and then the final ability data was taken (post-test.)

The population in this study amounted to 21 people who were athletic athletes at SMA Negeri 2 Kisaran. With a sample of 8 people. Sampling in this study used a purposive sampling technique (samples aimed). The requirements to become a sample are athletes who have already practiced shot put and are male, as well as athletes who are actively training and athletes who are willing to be sampled.

In accordance with the explanation and research objectives described previously, the research used is intended to determine whether there is a

contribution of medicine ball throw, bar twist, and lateral bound exercises to the improvement of the O'Brien style shot put by male athletes at SMA N 2 Kisaran in 2022.

The research method used in this research is experimental, using tests and measurements. The research design was designed using a Pre-test and Post-test One Design. Before the treatment was carried out, the initial test was carried out first, and at the end, the final test was carried out as follows:

Research Instruments

1. Medicine Ball Throw Arm Muscle Power Test
2. Waist Flexibility Test
3. Limb Muscle Power Test
4. Bullet Put Result Test

Data analysis technique

The data obtained from the results of the O'Brien style shot was put to the test using statistical procedures using regression analysis, normality test using liliefurs, and homogeneity test.

Result and Discussion

From the pre-test results of the medicine ball throw exercise on improving the results of the O'Brien style shot put by male athletes at SMA Negeri 2 Kisaran in 2022, data on arm muscle power was obtained with a score range between 2.70 – 4.28, the average value was 3.50, and the results of the pre-test bar twist exercise obtained a score range of 12–28, the average value was 19.12 and the results of the pre-test lateral bound, obtained a score range of 28–60, the average value was 40.5, then the results of the O'Brien style shot put pre-test obtained a range of scores 4.80-7.80, with an average score of 6.25.

The post-test results of the medicine ball throw exercise on improving the results of the O'Brien style shot put by male athletes at SMA Negeri 2 Kisaran in 2022 obtained data on arm muscle power with a score range between 3.56-5.80, an average value of 4.78, and a standard deviation of 2.54. The results of the post-test bar twist exercise obtained a score range of 18-47, the average value was 33.25, with a standard deviation of 9.55, and the post-test results

lateral bound obtained a score range of 33-67, the average value is 51.62, with a standard deviation of 10.17, then the results of the O'Brien style post-test result obtained a score range of 5.80-8.70, with an average value of 7.57 and a standard deviation of 1.07.

From the results of calculations on the data obtained, L0 = 0.1499. At the level of = 0.05 obtained Ltable = 0.285. Thus L0 = 0.1499 < Ltable = 0.285, it

means that H0 is accepted. The conclusion that can be drawn is that the data from the dependent variable of the shot put result is a normally distributed population. For = 5% of the distribution list 2 with DK = (4-1) = 3, we get 2 0.95(3) = 7.81 it turns out that 2 = 6.3920 < 2 0.95(3) = 7.81 so that the hypothesis stating the variance is homogeneous accepted at the level of = 5%. Based on this, it can be concluded that the four data come from homogeneous variance.

After the pre-test and post-test data were obtained, the next step was to test the hypothesis by using regression analysis and calculating the hypothesis. The results of the analysis of the first hypothesis, namely the medicine ball throw exercise, gave a significant contribution to the improvement of the O'Brien style shot put for male athletes at SMA Negeri 2 Kisaran in 2022, based on the calculation results Fcount = 17.31 and Ftable (0.05;1/14) = 4 .60, so that Fcount > Ftable with a contribution of 55.27%. The analysis of the second hypothesis, namely, bar twist training, gave a significant contribution to the improvement of the O'Brien style shot put by male athletes at SMA Negeri 2 Kisaran in 2022, based on the calculation results Fcount = 8.67 and Ftable (0.05;1/14) = 4, 60, so Fcount > Ftable with a contribution of 38.26%. Analysis of the third hypothesis, namely, lateral bound training gave a significant contribution to the improvement of the O'Brien style shot put for male athletes at SMA Negeri 2 Kisaran in 2022, based on the calculation results Fcount = 10.43 and Ftable (0.05;1/14) = 4, 60, so Fcount > Ftable with a contribution of 42.50%. Analysis of the fourth hypothesis, namely, medicine ball throw, bar twist, and lateral bound exercises jointly contributed significantly to the improvement of the O'Brien style shot put for male athletes at SMA Negeri 2 Kisaran in 2022. Based on the calculation results, Fcount = 5.14 and Table 0.95 (3.12) = 3.49 which means Fcount > Ftable so that H0 is rejected and contributes 83.76%.

From hypothesis testing, it can be concluded that there is a jointly significant contribution of medicine ball throw, bar twist, and lateral bound exercises to the improvement of the O'Brien style shot put for men's shot put athletes at SMA Negeri 2 Kisaran in 2022.

From the results of hypothesis testing, it is shown that there is a significant contribution from each variable to the increase in O'Brien-style shot put results. This shows that in the O'Brien-style shot put, the three physical factors are arm muscle power, waist flexibility, and leg muscle power which can be improved by practicing medicine ball throw, bar twist, and lateral bound as described in the previous section. Above, the three should not be forgotten in the implementation of the exercise program. Because the three physical factors are mutually sustainable in increasing the results of the shot put. If the three factors mentioned

above are owned by the shot put athlete, the maximum repulsion results will be easily obtained.

Conclusion

Based on the results of hypothesis testing and discussion of research results, the researchers drew conclusions, including There is a significant contribution from the medicine ball throw exercise to the improvement of the O'Brien style shot put by male athletes at SMA Negeri 2 Kisaran in 2022. There is a significant contribution from bar training twist on the increase in the O'Brien style shot put by the male athletes of SMA Negeri 2 Kisaran in 2022. There is a significant contribution from lateral bound training to the increase in the O'Brien style shot put by the male athletes of SMA Negeri 2 Kisaran in 2022. There is a significant contribution in terms of together from the practice of medicine ball throw, bar twist, and lateral bound to improve the O'brien style shot put result for the male athletes of SMA Negeri 2 Kisaran in 2022.

References

Akhmad, Imran. 2013. *Dasar-dasar melatih fisik Olahragawan.* Medan: Unimed Press.

Arikunto, Suharsimi. 2010. *Prosedur Penelitian Suatu pendekatan Praktek*. Jakarta: Rineka Cipta.

Azwar. 2015. *Kontribusi antara Latihan Decline Push-Up, Horizontal Swing dan Squat-Jump terhadap peningkatan hasil tolak peluru gaya O'Brien pada atlet putra ekstrakurikuler SMA N 2 Kisaran tahun 2015*. Skripsi Sarjana: UNIMED.

Bompa O. Tudor. 1999. *Periodization Theory and Methodology of Training.* Kendall/Hant: Human Kinetics.

Carr A Gary. 2003. *Atletik Untuk Sekolah.* Jakarta, PT Raja Grapindo Persada.

Emral. 2017. *Pengantar Teori dan Metodologi Pelatihan Fisik*. Depok: Kencana

Harsono. 1988. *Coaching and Aspek-aspek Psikologis Dalam Coaching.* Jakarta: Depdikbud Proyek Pengembangan LPTK.

Harsuki. 2003. *Perkembangan Olahraga Terkini Kajian Para Pakar.* PT. Raja Grapindo Persada. Jakarta.

IAAF. 2016. *Competition Rules 2016-2017*.

Jerver, Jess. 2010. *Belajar dan Berlatih Atletik*. Bandung: Pioner Jaya.

Robert C dan James C. *Plyometrics Explosive Power Training*. Edisi ke dua.

Sajoto. 1988. *Pembinaan Kondisi Dalam Olahraga*. Jakarta: Departemen Pendidikan Dan Kebudayaan.

Sudjana, 2009. *Metode Statistik.* Bandung: Tarsito.

Sukadiyanto. 2005. *Pengantar Teori Dan Melatih Fisik*. Yogyakarta: FIK Universitas Negeri Yogyakarta.

Sugiyono. 2015. *Metode Penelitian Kuantitatif, Kualitatif, dan R&D.* Bandung, Alfabeta.

Syarifuddin Aif. 1992. *Atletik*. Departemen pendidikan dan Kebudayaan, 1992.
Wiarto, Giri. 2013. *Atletik,* Yogyakarta: Graha Ilmu.