Effectiveness of Data Wellnes Training Program based on Androit Application for Long-Term Platda Pond Weightlifting Athletes 2024

Ade Ros Riza[1], Ibrhaim[2], Zen Fadli[3] and Nimrot Manalu[4]

{adesitepu@unimed.ac.id[1], ibrahim@unimed.ac.id[2], zenfadli@unimed.ac.id[3] and nimrot@unimed.ac.id[4]}

Universitas Negeri Medan, Jl. Willem Iskandar Pasar V Medan Estate
Faculty Of Sport Science

Abtract. This study aims to describe the results of wellness data for long-term PON athlete weightlifting athletes in 2024. There are 10 wellness data for training programs that must be filled in every day by athletes, so the application helps coaches monitor exercise progress based on existing Welnes data. This idea arose when researchers felt the need to compile data on wellness training programs even though they did not meet face-to-face and management in reporting exercise results. Facilitate athletes in submitting daily reports through telecommunications media. This research can also be used as an evaluation material in preparing the right recovery in the preparation of the training program which is closely related to the weekly training session. The research method used is a quantitative approach and uses the Research & Development (R & D) method from Sugiono by developing products, testing the effectiveness of products that achieve the desired goals.

Keywords : Wellnes Progress, Weightlifting

1 Introduction

Every athlete and team has a goal in their respective sports. Athletes train to achieve maximum performance. Sports achievement can be achieved if the training program is applied systematically and has gone through a very complex training process.[1] Physical exercise or sports activities provide benefits for psychological fitness (psychological fitness). Physical activity provides an outlet for instinctive aggressive urges, allowing people to relax, to forget their tangled thoughts, to reduce tension (stress).[2]

Every process of exercise in sports always requires an exercise program, both physical and technical.[3] The exercise program given must be appropriate because the human condition is always changing. The main target of exercise is the process towards being better, including

[1] Balley JA, 1977. **the Athlete's Guide: Increasing Strength, Power and Agility**. New York: Poker Publishing Company

[2] Bowers RW. Fox EL, 1992. Sports Physiology. 3rd edition, New York: Wm C Brown Publisher.

[3] Baumgartner, T.A dan Jackson, A.S, 1995. Measurement for Evaluation in Physical Education and Exercise Science, New York :Fifth Edition, Dubuque, Iowa, Brown and Benchmark.

ICIESC 2022, October 11, Medan, Indonesia

DOI 10.4108/eai.11-10-2022.2325303

improving the physical quality, functional equipment of the body and psychological quality.[4] Sports achievements are temporary, so training requires an adaptation process so that the results take longer to train, therefore to score potential champions it takes a long process and training time. However, the length of the training process does not guarantee that it will be successful without the support of the right training material.[5] Biomechanical efficiency and muscle strength can be developed in the form of proper exercise. Athletes can increase speed by increasing skill and strength, but the increase is to some extent, because genetic factors such as muscle type and neuromuscular work are more dominant.[6]

The Indonesian National Sports Committee (KONI) is the only organization authorized and responsible for managing, fostering, developing & coordinating all performance sports activities for each member in Indonesia. The North Sumatra KONI has the goal of realizing proud sports achievements at the world level, building character, elevating the dignity and character of the nation in order to participate in strengthening, fostering national unity and integrity, and strengthening national resilience. KONI is a professional, modern and independent parent organization. Early childhood development and planned and sustainable improvement of athlete achievement and Participate in developing Sport Science, Sport Industry and Sport Tourism.

The 20th PON will be held in North Sumatra and Aceh. KONI North Sumatra has the greatest responsibility for the achievements for the PON. North Sumatra KONI also collaborates with academics from the Faculty of Sports Science in the development of sport science. This can be seen in the appointment of the Dean of FIK Unimed as Chair of the North Sumatra KONI BINPRES. Efforts are being made in the BINPRES field, namely the formation of a team of physical trainers (strength conditioning) for selected sports in the development of the 2024 long-term regional government.

Weightlifting is one of the leading national sports that often gets medals at international events. Weightlifting is a very specific and very interesting sport, which requires strength, especially explosive power and high coordination. The percentage of strength components, especially maximum power, is very dominant in this weightlifting sport. So that we can map, that the focus of training is more in this strength component. In this strength training, it really requires accurate monitoring, in determining the training load and training density including proper recovery.

One of the obstacles faced by physical trainers is in carrying out the exercise program that has been prepared and reporting the progress of the exercise, especially on Wellnes data. Wellness data is a simple daily questionnaire that will be very helpful and useful for coaches in monitoring the condition of athletes, especially planning strategies that will be carried out when facing training and competitions. Surveying the condition of athletes, especially the level of sleep quality, stress, mood, soreness, fatigue, nutritional quality, focus, resting pulse, etc. The results can subjectively describe the physiological and psychological state of athletes every day.

---

[4] Astrand PO. Rodahl, 1986. Text Book of Work Physiology: physioLogical Basis of Exercise. New york: MC Graw Hill Bool Company.

[5] Bompa TO, 1990. Theory and Methodology of Training: The Key to Athletic Performance. 2nd edition. Iowa: Kendall/Hun Pub. Company

[6] Brooks GA, Fahey DF, 1985. Exercise Physiology: Human Bioenergetics and Its applications. New York: Macmillan

Accurate wellness data is very much needed to determine exercise density, nutritional fulfillment and most importantly proper recovery for determining the arrangement of training sessions.[7] Improper monitoring and evaluation will lead to over training which has an impact on the athlete's condition and can even result in injury. From the background of the problem, researchers are interested in conducting research by monitoring the effectiveness of wellness data as a reference for preparing exercise programs.

2 Metods

The method used in this research is the experimental method. This study looks at how much influence the application of wellness data has on the physical ability performance of athletes from the PON weightlifting plate. The test takes place over a three-month micro-cycle, starting from June to September 2022.

The number of samples in this study amounted to 9 athletes from the regional training weightlifting, centered on the terrain and high cliffs of North Sumatra. The instrument in this study used a standardized physical test based on the provisions set by the North Sumatra KONI.

3 Result

The results of this study will describe the performance/physical condition of the weightlifting athlete, where the most important component aspect in this research is the Vo2max ability with the test instrument, namely the 1600m run, the abdominal muscle endurance strength test, namely the 1 Min Sit Up test, the muscle endurance strength test. arm, namely Push Up for 1 minute, Explosive Power Test for leg muscles, namely the Vertical Jump test, and the Core Test for 12 levels of core stability. The following are the results of the Vo2maxs test ability of the athletes of the Pon Weightlifting Sports Training Center, North Sumatra:

Table 1. Result Vo2 Max

(VO2 Max)					
Sample Lifter		1600M			
No	Gender	Pre-Test		Post-Test	
		Score	Category	Score	Category
1	Male	2	Poor	4	Good
2	Male	3	enough	5	Exelent
3	Male	2	Poor	4	Good
4	Male	1	Bad	3	enough
5	Male	1	Bad	3	enough
6	Male	1	Bad	3	enough
7	Male	1	Bad	3	enough
8	Female	1	Bad	3	enough
9	Female	2	Poor	4	Good
Performance		32 %		71%	

[7] Keven. A. 2009. ***Dasar Ilmu Kepelatihan.*** Yogyakarta, PT. Citra Aji Parama.

From the test results based on the table above, it shows that there is a significant increase in performance based on the results of the initial test, which is 31% increasing to 71%. The following will present the results of the abdominal muscle strength test with the sit up test item which will be seen from the table below:

Table 2. Result Sit Up Test 1 Minute

Result Sit Up Test 1 Minute					
Lifter		Sit Up Test 1 Minute			
No	Gender	Pre-Test		Post-Test	
		Score	Category	Score	Category
1	Male	2	Poor	3	Enaugh
2	Male	3	Enough	5	Exelent
3	Male	2	Poor	3	good
4	Male	1	Bad	2	Poor
5	Male	1	Bad	2	Poor
6	Male	2	Poor	3	Enough
7	Male	2	Poor	3	Enough
8	Female	1	Bad	3	Enough
9	Female	2	Poor	4	good
Performance		35 %		62%	

From the test results based on the table above, it shows that there is a significant increase in performance based on the results of the initial test, which is 35% increasing to 62%. The following will present the results of the arm muscle strength test with the sit up test item which will be seen from the table below:

Table 3. Result Push Up 1 Minute

Result Push Up Test 1 Minute					
Lifter		Push Up 1 Menit			
No	Gender	Pre-Test		Post-Test	
		Score	Category	Score	Category
1	Male	3	Enough	5	Exelent
2	Male	3	Enough	5	Exelent
3	Male	3	Enough	5	Exelent
4	Male	2	Poor	4	Good
5	Male	3	Poor	4	Good
6	Male	3	Enough	4	Good
7	Male	3	Enough	4	Good
8	Female	3	Enough	4	Good
9	Female	3	Enough	4	Good
Performance		57 %		86%	

From the test results based on the table above, it shows that there was a significant increase in performance based on the initial test results, namely 57% increased to 86%. The

following will present the results of the leg muscle power test with the vertical jump test item which will be seen from the table below:

Tabel 4. Vertical Jump Tes

Vertical Jump Tes					
Lifter		Vertical Jump			
No	Gender	Pre-Test		Post-Test	
		Score	Category	Score	Category
1	Male	4	Enough	5	Exelent
2	Male	5	Enough	5	Exelent
3	Male	4	Enough	5	Exelent
4	Male	3	Poor	5	Good
5	Male	4	Poor	5	Good
6	Male	4	Enough	5	Good
7	Male	4	Enough	5	Good
8	Female	4	Enough	5	Good
9	Female	3	Enough	4	Good
Performance		77 %		97%	

From the test results based on the table above, it shows that there was a significant increase in performance based on the initial test results, namely 77% increased to 97%. The following will present the results of the core level test with the vertical jump test items which will be seen from the table below:

Table 5. Core Tes Level

Core Tes Level					
Lifter		Core 12 Level Stability			
No	Gender	Pre-Test		Post-Test	
		Score	Category	Score	Category
1	Male	2	Poor	4	Good
2	Male	3	Enough	5	Exelent
3	Male	2	Poor	4	Good
4	Male	1	Bad	2	Enough
5	Male	1	Bad	3	Enough
6	Male	1	Bad	3	Enough
7	Male	1	Bad	3	Enough
8	Female	1	Bad	3	Enough
9	Female	1	Enough	3	Good
Performance		28 %		67%	

From the test results based on the table above, it shows that there is a significant increase in performance based on the results of the initial test, which is 28%, increasing to 67%. The results of the overall performance of the weightlifting platda athletes can be seen from the following diagram:

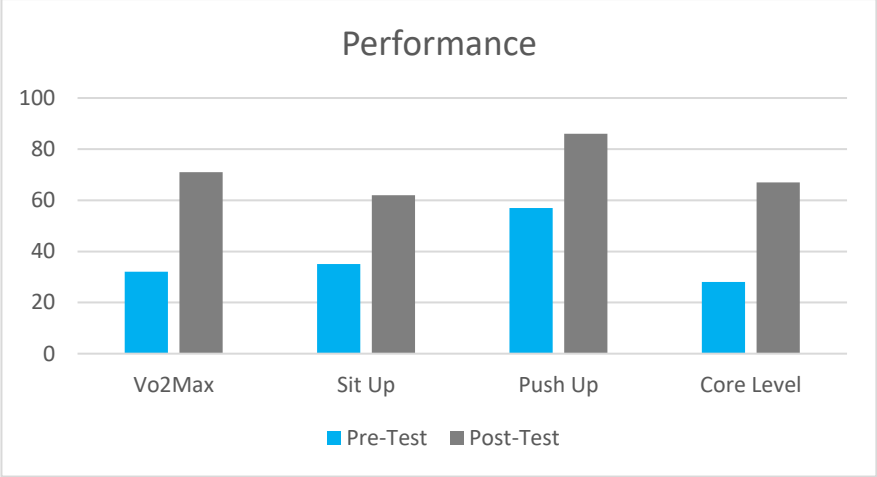

Fig 1. Diagram Persentase Performance

4 Conclusion

The results of this study indicate that there is a significant improvement in the physical condition of the North Sumatran weightlifting athletes. Treatment wellness has an important role for the trainer in adjusting the density of the exercise that will be carried out in each session. This wellness data also helps coaches in controlling and monitoring the condition of athletes from the physical, nutritional and psychological aspects.

This wellness data is also a reference for athletes to apply the right lifestyle, even though the training center has not been carried out by KONI. Athletes who are outside the city of Medan, or who are far from the coach's supervision, can manage their own conditions starting from rest time, consumption, and psychological state, so this data becomes very useful for coaches in carrying out appropriate treatment.

References

[1] Astrand PO. Rodahl.: Text Book of Work Physiology: physioLogical Basis of Exercise. New york: MC Graw Hill Bool Company. (2006)
[2] Balley JA.: the Athlete's Guide: Increasing Strength, Power and Agility. New York: Poker Publishing Company.(1977)
[3] Baumgartner, T.A dan Jackson, A.S.: Measurement for Evaluation in Physical Education and Exercise Science, New York :Fifth Edition, Dubuque, Iowa, Brown and Benchmark. (1995)
[4] Bompa TO.: Theory and Methodology of Training: The Key to Athletic Performance. 2nd edition. Iowa: Kendall/Hun Pub. Company. (2006)
[5] Bowers RW. Fox EL.: Sports Physiology. 3rd edition, New York: Wm C Brown Publisher.(1992)
[6] Brooks GA, Fahey DF.: Exercise Physiology: Human Bioenergetics and Its applications**.** New York: Macmillan. (1985)
[7] Keven. A.: Dasar Ilmu Kepelatihan. Yogyakarta, PT. Citra Aji Parama. (2009)