

Impact of Netball Players of Indian Physical College Through Weight Jacket Training Programme

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Abstract

In recent years and years, sports have improved dramatically in quality all across the world. The popularity of sports is currently growing at a rapid rate, and this happy trend is likely to continue in the future. The purpose of the study was to see how weight jacketing affected Vo2 Max in high school football players. Thirty netball players from diverse assets, LNUPE Gwalior, were chosen as subjects to obtain this inspiration driving the assessment. The subjects were developed between the ages of 19 and 24. They were split into two groups of fifteen: Group I received weight-lifting training, while Group II functioned as a control group that did not get any extra training outside of their regular games and practices. Prior to any training period, the participants were given the opportunity to try out a specified rule variable, such as Vo2 max. The treadmill was used to find a specific worldview variable, such as Vo2 max. On the selected premise variable, the analysis of covariance (ANCOVA) was used to see if there were any significant differences between the test and control assemblies. The centrality was tested with a 0.05 component of conviction, which was deemed appropriate. The current investigation demonstrated that there was a fundamental qualification on Vo2 max among the exploratory and control groups.

Keywords: Weight jacket training – Vo₂ max - netball players.

1. Introduction

The American Medical Association characterizes fitness as "the general ability to adjust and react positively to physical exertion. This infers people are physically fit when they can meet normal too the strange demand of day by day life securely and successfully without being excessively exhausted and still have energy left for relaxation and re-creational activities." Clarke has communicated that physical education must perceive the fundamental needs of physical fitness for young men and young ladies under their charge and this acknowledgment ought to turn into an assurance plan and direct a sound and viable physical fitness program for them. Satisfactory dimensions of physical fitness ought to be grown right off the bat throughout everyday life and afterward ceaselessly kept up through regular cooperation in a well-planned movement program to advance the all out prosperity of a person. Kids ought to be fit for cooperation in the play. Netball and volleyball are two of Fiji's most popular female-dominated sports. Netball and volleyball are high-intensity, irregular sports that require players to engage in short bursts of focused energy exercise followed by periods of high-intensity action. To achieve top execution, both games required specific similar characteristics and talents. To be effective, the two games require precise

body morphology (height, weight, and body piece) as well as explicit respiratory (pulse) and cardiovascular execution. [1],[2] While grabbing, tossing, spiking, and impeding a ball, these sports also necessitate the display of dangerous anaerobic processes (continuous hopping, running, turning, cutting, speed rise and deceleration). [3] Regardless of the above-mentioned bounds, actual strength, power, dynamic security, adaptability, spryness, and speed are the key execution barriers in both sports. [2],[3],[4] Physical execution is critical in netball and volleyball to allow players to consistently cover the court's perimeter while playing at various levels and capacities throughout the game. The application of these standards entails the control of various programme structure factors such as activity selection, requests for training activities/workouts, training power (load and repetition), rest periods between sets and activities/activities, and training recurrence and volume, with effective equalization of these variables resulting in positive adjustment. High-impact practice is defined as any activity that involves or improves the body's oxygen utilization. Due to increased hemoglobin dimension, vigorous training boosted cardio-respiratory endurance, which increased Vo2 max. Obstruction exercise is a crucial component of any adult fitness programme, and it must be performed with enough force to enhance strength, muscular endurance, and fat-free mass. Exercises in which the muscles produce effort against an external load are known as obstruction training. The most popular term used to describe it is "weight training." Individualized, dynamic, and explicit about how muscles will most likely be used in the chosen sport, such a training approach should be used. Simultaneous training is a strategy used by many trainers, and it entails training different features at identical levels of intensity inside the same training stage and on a frequent basis within the same activity. The greatest issue that can emerge from this kind of writing computer programs is that in many cases the a few characteristics one is hoping to upgrade end up rivaling each other for adjustment. A variety of training, whether it's quality training or long-distance running, will cause the body to react in specific ways, such as quality demeanour and atomic changes, allowing the body to acclimatize to the training boost and preparing us to handle this stressor if we have to confront it again (our next exercise or rivalry). One of the arguments against simultaneous training is that the internal environment of the body is altered as a result of the contrasting training stimuli accelerated by the various characteristics being prepared in the training day or training stage, confusing the body as to how it should react and resulting in less than ideal adjustments. The Interference Phenomenon is a term used to describe this phenomenon. You can't simultaneously be a world-class power lifter and a top long-distance runner. Aside from the debates over execution results, another significant issue with simultaneous training is detailed exceeding or overtraining, This happens when a competitor tries to compress numerous training features into a single exercise or training stage in order to reduce recuperation time and increase the amount of training kilometers on their body. Surprisingly, despite these objections, simultaneous training exams are being considered. at the impacts of simultaneous training have all the earmarks of being blended as to the outcomes with certain examinations appearing at be viable and different investigations appearing at be negative to quality, power, or perseverance adjustments. Obviously, the subjects in many of these tests, who are typically school-aged exercise science understudies with little to no training background, must be taken into account, as they may react differently than someone with a

higher training age or a better position in the world. Dynamic aerobic exercise generates a curvilinear rise in stroke volume, as well as an increase in oxygen utilisation and pulse that is proportionate to the force of the forced movement. Increased exercise demands cause the cardiovascular system, which includes the heart, blood vessels, and blood, to respond properly. The circulatory response to exercise is, with a few exceptions, truly proportional to skeletal muscle oxygen needs for any random rate of activity, and oxygen take-up increases linearly with rising work rates. A person's maximum oxygen take-up, which is a component of cardiac yield, is increased by the blood vessel mixed venous oxygen distinction. As a result, heart yield plays a critical role in accumulating the oxygen needed for work. The cardiovascular yield rises in a nearly straight line as the pace of work rises to meet the rising oxygen demand, but only until it hits its maximum limit.

Auscultation, palpation, and ECG records can all be used to determine the resting pulse. The bell of the stethoscope is put to one side of the sternum, just over the dimension of the areola, while cheering up rate via auscultation. The number of heart thumps can be counted. VO₂ max is the maximum rate of oxygen usage as measured during steady exercise, most commonly on a motorized treadmill (also known as maximal oxygen utilization, maximal oxygen take-up, top oxygen take-up, or maximal aerobic capacity). Maximal oxygen utilization is a critical driver of endurance capacity during delayed, sub-maximal activity and represents an individual's aerobic fitness. The letters V stand for volume, O₂ for oxygen, and max for maximum. VO₂ max is measured in milliliters of oxygen per kilo gramme of body mass per minute (ml/kg• min) or as a flat rate in liters of oxygen per minute (L/min). The last articulation is frequently used to assess the performance of athletes who compete in endurance sports..

2. Maximal Oxygen Consumption (VO₂ Max)

VO₂ max is the maximum rate of oxygen consumption as measured during steady exercise, most commonly on a motorized treadmill (also known as maximal oxygen consumption, maximal oxygen take-up, top oxygen take-up, or maximal aerobic capacity). Maximal oxygen consumption is a critical indication of an individual's endurance ability during delayed, sub-maximal exercise and indicates their aerobic fitness. The letters V stand for volume, O₂ for oxygen, and max for maximum. VO₂ max is measured in liters of oxygen per kilo gramme of body mass per minute (L/min) or milliliters of oxygen per kilo gramme of body mass per minute (e.g., ml/(kg• min)). The last articulation is widely used to evaluate endurance athletes' performance (5).

2.1. Explosive power:

The two-leg vertical squat jump test allows you to keep your lower body steady up in the air. The member remained near to the Vertec and was instructed to broaden her arm and use one hand to contact the highest possible vane while standing immovably on the ground. The position tallness was reported as this stature. Members hopped between the two boundaries and made contact with the most notable conceivable vane. Three attempts were done by each

member, and the average was kept. The difference between standing arrive at stature and maximum vertical leap tallness was used to calculate the maximum vertical leap and then switched over to reduce leg muscle unstable power. [13]

2.2. Dynamic stability:

The calculated using the Y Balance Test (YBT). The YBT is a useful tool for determining dynamic stability in three bearings: front, poster lateral, and poster medical. The interrater test-retest dependability of the YBT is outstanding (ICC = 0.80-0.85). [14] On the middle stage, the YBT test was done for the member to stand shoeless and await additional instructions from the professional. Members were instructed to reach with a free leg in the front bearing several times, followed by the poster lateral heading, and then the poster medical route multiple times while remaining on a single leg. In all preliminaries, the maximum arrive at distance was maintained. In the event that the member lost his balance, took his heel off the stage, and needed assistance, a preliminary was discarded and rehashed. Three paths were used to isolate the amount of maximal arrive at distance toward each path, yielding a flat out arrive at distance, which was used to break down the general execution of the YBT test. The scores of the leading legs were used to gather more information.

3. Material And Methods

To achieve this, thirty (N = 30) male netball players were selected at random from various sources at LNUPE Gwalior, Madhya Pradesh, India. The chosen subjects ranged in age from 19 to 24 years old. They were split into two equal groups of fifteen, with Group I receiving weight-lifting instruction and Group II serving as a control group that received no additional training outside of their regular curricular activities. The experimental group trained three times a week for twelve weeks. To estimate body fat, they chose to measure variable cholesterol. Pre-test data was obtained before the training system was installed, and post-test data was collected after the training was completed.

3.1. Training Program

The intensity fluctuations for experimental groups over a 12-week training period are listed below Table - I.

Weeks	1&2	3&4	5&6	7&8	9&10	11&12
% of intensity	56	45	67	87	88	91

Table-I: Intensity Variations In Training Program

3.2. Assessment of Vo₂ max

The results of this investigation revealed that there was a fundamental improvement in Vo₂ max while differentiation and control gathering following weight jacket training. In overall, the two-month experimental treatment had an effect on the thickness of Vo₂ max in school

netball players. The above results are retained by Millet and others, Zabiholah Tarasi and others, Wilson and others, Ferrauti, Bergermann, and Fernandez-Fernandez.

In ml/kg/min, the estimated VO₂ max can be computed.

$$VO_2 \text{ max} = 54.07 - 0.1938 \times \text{Body weight} + (4.47 \times \text{Speed}/1.6) - 0.1453 \times \text{heart rate} + 7.62 \times \text{gender}$$

Where, speed = km/h, gender = 1 for men, 0 for women body weight = kg

3.3. Statistical Technique

On the chosen basis variable, the analysis of covariance (ANCOVA) was done to examine if there were any significant differences between the test and control groups. To test the significance, a 0.05 level of certainty was used in each example, which was found appropriate.

4. Results

Table II shows the statistical analysis of Vo₂ max as a result of weight jacket training.

		Exp Group	Con Group	F ratio
Pre Test	Mean	40.25	42.45	2.13
	S D	4.77	45.96	
Post Test	Mean	56.12	44.48	13.48*
	S D	4.87	42.92	
Ad Post Test	Mean	52.22	41.47	64.59*

Table – II: computation of analysis of covariance on VO₂ max

* At a.05 level of confidence, this is significant. Table values of 4.20 and 4.21 are necessary for significance at the.05 level with if 1 and 28 and 1 and 2.

For the weight jacket training, the pre-test values of Vo2 max group and the control group were 39.45 3.77 and 39.48 3.96, respectively, according to Table II. With if 1 and 28 at.05 level of confidence, For the pre-test score of the weight jacket training group and the control group, a „F- ratio value of 1.13 was achieved on cholesterol was less than the needed table value of 4.20 for significant.

The mean post-test Vo2 max values for the weight jacket training and control groups were 46.12 3.87 and 39.48 3.92, respectively. With if 1 and 28 at the.05 level of confidence, the resulting „F- ratio value of 13.47 for post-test scores of the weight jacket training group and the control group exceeded the needed table value of 4.20 for significance.

Weight jacket training and control groups had adjusted post-test mean Vo2 max values of 46.22 and 39.47, respectively. With if 1 and 27 at.05 level of confidence, the resulting „F- ratio value of 65.58, which was greater than the required table value of 4.21 for significant.

The results of this study revealed a substantial difference in Vo2 max between the weight jacket training group and the control group.

5. Conclusion

The VO2 expectation models presented in this study are simple and easy to use, making them a useful option for both recreational athletes and human services professionals. Reasonable and proper use of these predictive models will yield considerable data in terms of providing a truly precise estimate of peak oxygen take-up, which is useful for establishing cardio-respiratory fitness and potentially improved risk classification.

The findings of this study revealed that as compared to control groups, there was a significant improvement in Vo2 max after weight jacket training. In college netball players, the two-month experimental treatment has a significant impact on Vo2 max thickness. The above results are supported by Millet and others, Zabiholah Tarasi and others, Wilson and others, Ferrauti, Bergermann, and Fernandez-Fernandez.

6. References

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