The Effect of Exercises with the Inverse and Speed Play Method of Enduring the Performance and Some Functional Variables and Blood Components of Young Football Players

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Abstract

Studies which concerned with the human body physiology and the functional variables that occur as a result of effective athletic training methods have become an important and fundamental pillar which depend to direct training operations to achieve great accomplishments, the training process cannot achieve tangible results without depending on successful and effective training methods and ways to avoiding traditional work, which made it necessary for the coaches to search for the best of these methods that affect the work of the sports body's functional bodies positively, from these methods is reverse training, which represents a recent trend in the training field that uses various activities not related to the specialized activity and adopts training devices and tools that improve and develop physical efficiency and job indicators, In addition to adding them to the factors of pleasure, excitement, suspense and motivation in the practice direction, as well as the speed play method, which depends on the change in the speed of performance through running for various distances and in variable forms have a nature of training field, such as sandy land, plains, heights or distances with different speeds, which works positively to improve Aerobic and anaerobic capabilities, thereby improving the functional blood components.

Keywords: *Inverse, Enduring, Blood Components*

Introduction

The containing and current development in the field of sports training is one of the main factors that made sporting events work on a rapid pace towards progress in the great results level, and this is done through integrated sports preparation in various physical, skill, planning, psychological and mental aspects (1). Therefore, studies concerned with the physiology of the human body and the functional and biochemical variables that occur as a result of effective and influential training have become one of the main pillars which depend on it in directing the training process to achieve the required success (2).

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Achieving the tangible results in the training science does not take place without the adoption of training ways and methods of modernity and development to move away from the traditional in training which allow to make a clear changes in the level of trainees, Therefore, the coaches should search for the best of these methods that affect the functional body sports equipment positively, One of these methods is counter-training and speed play, which represent modern trends in the field of preparation and training, as counter-training works to improve and develop physical efficiency and functional indicators through using a number of diverse activities that depend on many training methods and equipment, which is reflected in the physical and functional capabilities of the players, as well as increasing motivation, excitement and suspense in the direction of practice , multifaceted development, and it also contributes to reducing the risk of injury in the specialized activity(3), the cross training includes different forms of exercises that

are performed in the training unit itself or on training units within the schedule prepared for this purpose, For example, you can run , lift weights on the same day and swimming exercises on the next day, so the different diversity of these exercises allows us to use different parts of the body and also allows by using different and multiple exercises[4]. Also, "cross-training represents an organizational form of training methods and methods that depend on diversity in the practice of various activities and sports related to the specialized activity with a view to developing motor, physiological and skill capabilities through using the devices, tools and modern techniques in the field of training[5], In addition to this, speed play training is used, which is a method that depends on the change in the performance speed by using running in various forms that are between slow and fast running and walking and running at full speed in various terrain areas [6], this method affects positively to improve the aerobic and anaerobic capabilities that reflected on the body's systems and blood components, as it helps to "Strengthening muscle, tendon ligaments, increasing red blood corpuscles count and hemoglobin level [7]. The nature of exercises used in both methods contributes to a number of changes in the functions of vital systems while increasing the player's ability to continue performing in consistent manner with the competition nature and achieving the required results [8]. Hence the importance of the research in identifying the effects type that will be caused by special exercises which applied in a cross-training method and play (change) quickly in endure performance and some functional indicators and blood components of young football players [9].

Methodology

The choice of the appropriate approach should compatible with the nature of the problem and contribute to finding solutions. The researchers used the experimental approach (the two equivalent groups) with pre and posttests.

Population and Sample

The search population determined by the players of Wasit Governorate youth football clubs, which numbered (5) clubs and the total of players (96) players, the research sample was chosen in a random manner (lots) and was represented by Wasit club players and their number (18) players representing (18.75%) of the research population were divided into two equal groups by random method (odd numbers), As it represented the first experimental group that is trained in the inverse training method, while (marital numbers) represented the second experimental group that is trained in the speed play method.

Homogeneity of the Sample

Avoiding the factors which may affect in the experiment results and for the occurring variables of the players levels to be in accordance with the curricula prepared by the researchers, The homogeneity and parity process was performed in the variables of height, weight, training age, endure performance, maximum of oxygen consumption, vital capacity, hemoglobin as well as red blood corpuscles and platelets, all scales indicated that it achieves the moderate curve, as the ratio was between (± 3), indicates the good distribution of the sample members as well as the symmetry in endure performance and some functional indicators and blood components, as in Table (1).

Table (1)The individuals homogeneity of the research sample

Variables	Measure unit	Arithmetic mean A	Standard deviation	Mediator	torsion Coefficient
Length	CM	175.6	4.355	177	0.964
Weight	KG	72.16	2.6	71.8	0.415
Training age	year	2.5	0.729	2	2.05
age	year	17.55	1.63	17	1.01

Means of data collection

- Arab and foreign sources.
- World wide web.
- Test and scale.
- Statistical means.

Devices and used tools in the research

- HP laptop computer.
- Casio manual calculator, (1).
- (30) footballs.
- Tube to save blood, (20).
- A spyrometer for measuring vital capacity.
- Barriers and signs of different heights.
- Medical balls of different weights.
- Swimming pool.
- Stadium
- Iron terraces.
- (6) basket balls.
- (6) Hand balls.

Determination of blood components and physiological indicators

To determine the blood components and physiological indicators appropriate to the research procedures that researchers want to study, the researchers prepared a questionnaire that included blood components and physiological indicators, and it presented to a group of experts and specialists • to choose what suits the nature of the research problem, the researchers have the components and indicators that got the highest percentage of the experts 'choice, as in Table (2)

Table (2)Candidate tests for physical abilities

Variables	experts' number	approvals number	Square ka 2
red blood corpuscles		5	100%
White corpuscles		4	80%
Platelets		5	100%
hemoglobin		5	100%
PH	5	3	06%
the maximum of oxygen consumption		5	100%
vital capacity		5	100%
Endure performance		5	100%

Exploratory experiment

In order to identify the difficulties and problems facing the two researchers in conducting the tests, the researchers conducted an exploratory experiment on (6) players from outside the research sample on Saturday and Sunday, 3/18/18/2018, as the blood drawing process was done to identify the functional indicators at nine o'clock in the morning on Wednesday 16/5/2018 in Al-Saeedi Lab and on the next day the process of testing the maximum consumption of oxygen and the vital capacity in Al-Karamah teaching Hospital and endure performance test was conducted at five o'clock from the same day, with the help of the Assistant Working Group ••.

Pre-test

The researchers conducted the pretests of the research sample as follows, as the blood drawing process was done from the members of the two research groups at exactly ten o'clock in the morning on Tuesday 20/3/2018 in Al-Saeedi Lab and by the amount of (5 Cc) from each player and was saved in special tubes to be treated after to know the percentage of results in the blood components (Blood hemoglobin - platelets - red blood corpuscles - white blood corpuscles), on the following day, i.e. at nine in the morning on Wednesday, 3/21/2018, the process of measuring the maximum consumption of relative oxygen, as well as the vital capacity in Al Karama Teaching Hospital in Wasit, was tested with a stationary bike test and a spy meter to measure the vital capacity, while a endure the performance test was conducted in the hour Sixth of the same day in the football stadium of Wasit Club.

Parity of the sample

After completing the tribal tests of the research sample, the parity process was performed in physiological variables, blood components, and endure performance. As shown in Table (3).

Table (3) Blood components, and endure performance

Variables	Experimental group1		Experimental group2		Calculated T value	Tabular T value	The differences indication
	A	S	A	S			
Endure performance	9.14	3.17	9.22	3.18	0.074	2.12	Not significant
The maximum consumption of oxygen	41.8	2.38	41.22	2.29	0.725		Not significant
Vital capacity	348.50	32.165	346.44	31.22	0.188		Not significant
blood Hemoglobin	14.11	0.78	14.16	0.96	0.15		Not significant
Platelets	206.75	53.20	209.65	53.65	0.052		Not significant
red blood corpuscles	5.65	0.34	5.59	0.29	0.6		Not significant
White corpuscles	6.60	1.64	6.38	2.01	0.564		Not significant

The main experience

The two researchers prepared a special exercise according to the inverse and speed play training method for the two research groups based on the results of the pre-test. As he began applying the vocabulary in the main experiment on Saturday, 24/3/2018 for the first experimental group, which is trained in the inverse training method, and on Sunday, 25/3/2018 for the second experimental group, which trains according to the style of Speed play and on the Wasit football club stadium according to the following:

1- The duration of the training curriculum is (8) weeks.

2- The number of training units for each group (24) training units.

3- Training days for the first experimental group (Saturday - Monday - Wednesday) and for the second experimental group (Sunday - Tuesday - Thursday).

4- The time of one training unit is (90) minutes, and the total time of the training units is (2160) minutes (36 hours).

5- The main experiment was applied on Saturday 24/5/2018 for the first experimental group and on Sunday 25/3/2018 for the second experimental group and until Wednesday 23/5/2018 for the first experimental group and on Thursday 24/5/2018 for the second experimental group.

Post- tests

After completing the application of the training vocabulary of the two experimental groups, the researchers conducted the post tests and the researchers were keen to provide the same conditions which conducted to the pre-tests , As the blood drawing process was performed for the individuals of the research sample at ten o'clock on Saturday 26/5/2018 in Al-Sa'idy lab by using the same steps followed in pre- tests to measure blood variables (blood hemoglobin - platelets - red blood corpuscles - white blood corpuscles), At nine o'clock on the morning of Sunday 27/5/2018, the maximum consumption measure process of the relative oxygen and the vital capacity was measured by testing the stationary bike and spy meter in Al-Karamah Teaching Hospital in Wasit Governorate, while the endure the performance test was conducted at six o'clock in the same day and on Wasit football stadium.

Results

Presenting and discussing the results of the pre and posttests of the first experimental group.

Table (4) The pre and posttests in the hemoglobin of blood, platelets, red and white blood corpuscles

Variables	Pre test	Post test	P	P H	Calculated T value	Tabular T value	The differences indication	Evolution rate
Endure performance	9.14	11.88	2.74	0.69	3.97	2.30	significant	10.94%
The maximum consumption of relative oxygen	41.8	53.77	11.97	1.72	6.95		significant	28.63%
Vital capacity	348.5	495.81	146.31	8.215	17.81		significant	42.26%
Hemoglobin of blood	14.11	14.83	0.72	0.13	5.53		significant	5.10%
Platelets	206.75	224.15	17.4	2.27	7.66		significant	8.41%
red blood corpuscles	5.65	5.94	0.29	0.03	9.66		significant	5.13%
White corpuscles	6.60	7.12	0.52	0.07	7.42		significant	7.87%

Table (5) The results of the pre and posttests in the variables of blood hemoglobin

Variables	Pre test	Post test	P	P H	Calculated T value	Tabular T value	The differences indication	Evolution rate
Endure performance	9.22	11.48	2.28	0.53	4.30	2.30	significant	24.56%
The maximum consumption of relative oxygen	41.22	53.69	12.47	1.54	8.09		significant	30.25%
Vital capacity	346.44	418.75	72.31	6.88	10.51		significant	20.88%
blood Hemoglobin	14.16	14.84	0.68	0.12	5.66		significant	4.80%
Platelets	209.65	226.55	16.9	3.4	4.97		significant	8.06%
red blood corpuscles	5.59	5.98	0.39	0.04	9.75		significant	5.18%
White corpuscles	6.38	7.13	0.75	0.09	8.33		significant	11.75%

4- 3 Presenting and discussing the results of the posttest between the two experimental groups, between the results of endure the performance variables, the maximum consumption of relative oxygen, the vital capacity, hemoglobin, platelets, and red and white blood corpuscles in the two-post tests of the two experimental groups .

Table (6) Arithmetic mean, standard deviations, calculated and tabulated (T) value

Variables	Experimental group1		Experimental group2		Calculated T value	Tabular T value	Freedom degree	Significant level	The differences indication
	A	S	A	S					
Endure performance	11.88	2.92	11.48	2.39	0.38	2.12	16	0.05	Not significant
The maximum consumption of relative oxygen	53.77	11.890	53.69	11.38	0.02				Not significant
Vital capacity	495.81	114.66	418.75	111.63	1.99				Not significant
blood Hemoglobin	14.83	0.51	14.84	0.53	0.058				Not significant
Platelets	224.15	27.73	226.55	0.4	0.24				Not significant
red blood corpuscles	5.94	0.29	5.98	0.02	0.4				Not significant
White corpuscles	7.12	1.18	7.13	1.16	0.02				Not significant

Looking at the results of the post tests in Table (6) of the two experimental groups, we find in the endure the performance variable that the calculated (T) value of (0.38) is less than the (T) value of the table (2.12), and this indicates that there is no significant difference between the two groups in the post test, Although there is a clear moral difference between the pre and post tests for both groups, this clear the effect of the two training methods in developing endure performance, Where we find that cross training has a great positive impact on aerobic and anaerobic endurance as well as improving the level of muscle strength, flexibility and respiratory capacity [(10)] and this is what football effectiveness requires, as there is also a positive effect of the speed playing method in improving the aerobic and anaerobic capacity.

Conclusions

- Inverse and speed play training has an effective effect on functional variables and blood components related to research procedures.

- The optimal choice of the training method has a major role in developing and improving the work of the athlete's body's functional devices and increasing the rate of development.

- The use of the two methods of inverse training and sped play has a positive role in the effectiveness of football for its contribution to developing the physical, functional and skill potential of young football players.

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