The effect of aerobic exercise and ginseng extract on developing the special endurance of young football players

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Abstract

The researchers touched on the importance of aerobic and anaerobic exercises and ginseng extract in developing special endurance and some basic football skills, as ginseng stimulates and stimulates the nervous system, as ginseng is one of the medicinal plants that have a great effect for the athlete in terms of physical and physiological that works to provide a suitable physical fitness and It increases the activity and vitality of the body and helps the body to resist nervous fatigue.

The researchers put forward the following hypotheses:

1. The use of aerobic exercise and taking ginseng extract had a positive effect on developing the special endurance of young football players.
2. There is a preference for using aerobic exercise and taking ginseng extract in developing the special endurance of young soccer players.

Completing the process of testing and measuring the research variable. The results were extracted after statistical treatment, from which the researchers reached several conclusions, namely:

1. Adopting aerobic exercises and taking ginseng capsules in approved doses and proportions in preparing programs to develop special endurance capabilities for football players for youth under (19) years old.
2. Conducting experimental research to find out the effect of taking ginseng extract for young soccer players in particular on developing physical capabilities that were not covered by the current study.

Keywords: *Aerobic exercise, ginseng and endurance.*

Introduction

The game of football is one of the sports that is characterized by physical exertion and a relatively long period, during which the player's body loses a lot of materials and physical components to be able to continue to perform at a high level, as this causes an increased feeling of fatigue, so the standardized and purposeful sports training helps players to delay fatigue for a longer period. Possible.

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The player must be distinguished by football and possess high levels of physical abilities, especially the special endurance and energy production systems of the antenna, meaning that special training is required to bring them to a state of physiological adaptation to the vital organs and withstand effort during the match to achieve the best possible achievement. The ginseng plant is a useful nutritional supplement for athletes to increase activity and vitality and resist fatigue during exercise and sports competitions, and it does not contain any substance mentioned in the list of substances banned by the International Olympic Committee.[1] Powder of ginseng root extract in capsules in pharmacies as a pharmaceutical preparation to increase the efficiency, vitality and spirits of the person, and the plant ginseng is one of the most important that the pharmacy offers to a person to increase his vitality and sexual and mental

efficiency of its superiority over chemical drugs and it is free from harmful side effects and its importance for athletes lies in stimulating the nervous system and increasing His efficiency, especially in learning and mastering the basic skills that are essential to the technical performance of football players.[2]

Therefore, the importance of research lies in identifying the importance and effect of aerobic exercise with eating ginseng on developing the special endurance of young football players.

Research Methodology

The researchers used the experimental approach with the experimental design of two experimental groups (equivalent groups) with pre and posttest and because it is the appropriate way to solve the problem and to prove his hypothesis as a dependent and controlled change of the specific conditions for an event, and to note the changes resulting in the event itself and its interpretation.

Community and sample research: The research sample consisting of (18) players representing the players of the Specialized School of Football in the two governorates of Babylon (under 19 years), the youth group, was selected from a total of (25) players representing the community of origin, and the individuals of the research sample were randomly selected, then the sample was divided by lottery into (6 players for the first group, (6 players) for the second group, and (6 players) for the third group, which is the control group, and the percentage (72%) was from the original research community.[3]

Means, devices and tools used in the research:

1. Observation.
2. Personal interviews.
3. Tests and measurements
4. Data registration forms
5. Training curriculum
6. Exploratory experiments
7. Auxiliary work team
8. Arab and foreign sources and references
9. A whistle (2), a type of Canadian-made Fox.
10. HP laptop (no laptop), count (1) Korean made.
11. Hand-held electronic calculator (CASIO), count (1).
12. Plastic cones of different sizes.
13. Manual electronic stopwatch.

Field research procedures

Determine the doses of ginseng intake for the first experimental group

1. The effective doses for adults should range between (45-70) grams and with the ratio of ginsides (2-8) grams for a period limited to (8-12) weeks as a maximum.
2. American ginseng should be taken every 12 hours, twice a day.
3. It is preferable to take American ginseng before eating to increase the speed of absorption of nutrients and to make more use of them.

The use of American ginseng should not exceed 3 months, because it leads to a deficiency of vitamin B6 in the body, which leads to feelings of lethargy and depression .[4]The researcher will give the plant potions to the players according to regular fines and times. The use of American ginseng should not exceed 3 months, because it leads to a deficiency of vitamin B6 in the body, which leads to feelings of lethargy and depression.[5]

Define the search tests

Physical tests: The researcher used the tests after the researcher reviewed the specialized sources, the opinion of the supervisor, and the scientific committee's support for approving the research project on the validity of these research tests.

Speed endurance test:

- Name of the test: Running the ball for a distance of (5* 30) meter without stopping [6].
- Objective of the test: To measure the soccer velocity tolerance.

Performance Test[7]

- Name of the test: He ran sloping with the ball and ended with scoring (twice from left and right to the side of the court)
- Objective of the test: to measure the performance tolerance.

Pilot study: The pilot study was conducted on 11/30/2019 corresponding to Thursday at 4 pm on a sample consisting of (6) players representing the team of

the Specialized School of Football in Babil Governorate for the youth group (under 19 years) who were selected from outside the research sample, and the purpose of the experiment was Is to get to know:[8]

1. The validity of some of the exercises used in terms of practical application.
2. The validity of the tools used in the exercises.
3. The time spent performing the exercises.
4. Identify the efficiency of the assistant staff in implementing the training curriculum.
5. Identify the negatives that may appear when performing tests in order to pass them.

Pre-test: The pre-tests for the research sample were conducted on 3-4/12/2019 on Tuesday and Wednesday, respectively, at four o'clock in the evening for the physical tests, and on Wednesday 4/12/2019 at the same time for the skill tests of the three groups, and the tests were conducted on the playground of the Specialized School in the football.

The main experience of the search: The implementation of the main experiment began on Sunday (12/8/2019) and ended on Friday (1/17/2020).

Aerobic exercise: The researcher prepared regular aerobic exercises for the players of the Specialized School in Babylon, youth category (under 19 years). Sportsman.

Post tests: The post tests were conducted on Sunday and Monday (19-20/1/2020) respectively, at four o'clock in the evening on Sunday 19/1 for the physical tests and on Monday 20/1 for the skill tests and for the three groups, and the conditions for the pre-tests themselves were fulfilled, as much as possible.

Results and Discussions

Table 1. Shows the values of the median, the quartile deviation, Wilcoxon value in the pre and posttest of the research variables for the first experimental group

Variables	Units	Tests	Median	SD	Wilcoxon	Significance value	Statistical significance
Speed endurance	Second	Pre	42.075	1.00621	2.33	0.011	Sig.
	Second	Post	39.605	1.0503			
Strength endurance	Numb.	Pre	31	3.464102	2.163	0.0288	Sig.
	Numb.	Post	34	2.0328			
Performance endurance	Second	Pre	31	2.16795	2.449	0.014	Sig.
	Second	Post	30	2.20795			

Table 2. Shows the values of the median, the spring deviation, Wilcoxon in the pre and posttest of the research variables for the second experimental group

Variables	Units	Tests	Median	SD	Wilcoxon	Significance value	Statistical significance
Speed endurance	Second	Pre	41.675	0.6316248	2.21	0.022	Sig.
	Second	Post	40.57	0.80991			
Strength endurance	Numb.	Pre	28	4.4158804	1.054	0.034	Sig.
	Numb.	Post	31	1.16905			
Performance endurance	Second	Pre	31	1.54919	2.232	0.026	Sig.
	Second	Post	30	1.91919			

Table 3. Shows the values of the median, the spring deviation, and the Wilcoxonvalue for the three search groups in the pre and post tests of the strength endurance test

Groups	Pretest		Posttest		Wilcoxon	Significance value	Statistical significance
	Median	SD	Median	SD			
Control	42.17	0.9359843	41.09	1.01614	2.201	0.028	Sig.
First experimental	42.075	1.0062090	39.605	0.80991	2.33	0.011	Sig.
Second experimental	41.675	0.6316248	31	0.80991	2.21	0.022	Sig.

Which confirms the presence of a significant difference in favor of the post-test of the first experimental group, and the researcher concludes from this that the speed tolerance characteristic of the experimental group members has developed significantly due to the effectiveness of using aerobic exercises with the intake of ginseng capsules with a multifaceted effect by taking into account the use of exercises Speed in different forms and for various distances as this helped improve the physiological ability of the players and improve the general compatibility and help in the process of adaptation to high physical requirements,[9] as well as through the exercises used by the researcher, which aims to codify the components of the training load in terms of intensity, repetition and comfort to the extent that it works on The development of speed tolerance, in addition to aerobic exercises, led to the development of the level of agility among the members of the experimental group, which had the effect of reducing the recoil time (changing direction) while running This test as one of the factors of speed and balance during change of direction and rapid responses to changing situations .[10] On the other hand, we notice that there has been progress, but it is not prominent in the post-test of the control group in the same test, as the value of (Wilcoxon) is (2.201).

As for the level of significance (0.028), despite the presence of statistically significant differences, the development of the level of speed tolerance among members of this group did not rise to the level of development of members of the first experimental group.[11] The researcher believes, through his follow-up of the training units, that the little development that occurred at the level of the control group members balanced with the development of the members of the first experimental group was the result of interest in developing the qualities of speed and endurance separately and not focusing on the compound characteristic of these two characteristics (endurance speed) while the exercises that were He applied it and used the extract of the ginseng herb on the members of the first experimental group, aiming to develop endurance and speed as well as the mutual relationship between them (endurance speed).[12]

Table 4. Shows the values of the median, the spring deviation, and the Wilcoxon value for the three search groups in the pre and post tests of the strength endurance test

Groups	Pretest		Posttest		Wilcoxon	Significance value	Statistical significance
	Median	SD	Median	SD			
Control	25	3.48807492	26.5	1.31661	1.511	0.043	Sig.
First experimental	31	3.464101615	34	2.03280	2.163	0.0288	Sig.
Second experimental	28	4.4158804	31	1.16905	1.054	0.034	Sig.

By looking at Table (4), we notice that there is a significant difference between the median for the two measurements before and after the first experimental group in the sitting test - jumping to the top to measure strength tolerance, and this difference was very clear as the value of (Wilcoxon) for the first experimental group was (2.163) Comparison of the Wilcoxon value for the control group and the second experimental group, where the results were (Wilcoxon for the control group 1.511) (the value of Wilcoxon for the second experimental group was 1.054) and the level of significance was less than (0.05). Ginseng works to develop the level of strength endurance by raising the efficiency of the nervous system and thus an evolution occurs in the

amount of nerve signals emanating from the brain and into the working muscles, and also the ginseng extract works to prevent lactic acid from accumulating in the muscles,[13] and also through the training method used and changing its percentage and types according to the goal of training And the solution to the main duty is to reach a high level of endurance of strength as one of the main components of special endurance, which made the development of the level of members of this group The first experimental test results were quick and effective in this test, which is a prominent indicator of strength tolerance growth.[14]

Table 5. Shows the values of the median, the quartile deviation, and the (Wilcoxon) value for the three research groups in the pre and posttests to test endurance performance

Groups	Pretest		Posttest		Wilcoxon	Significance value	Statistical significance
	Median	SD	Median	SD			
Control	30	0.470196014	30	1.11196	2	0.046	Sig.
First experimental	31	2.167948339	30	2.20795	2.449	0.014	Sig.
Second experimental	31	1.549193338	30	1.91919	2.232	0.026	Sig.

The exercises were also characterized by comprehensiveness as the use of various and different training method, method and means effectively gave various results and different and multi-faceted effects, which was reflected in the development of various physical characteristics in addition to the focus that the researcher adopted in giving exercises to focus on developing the components of special endurance (speed endurance, Endurance, strength, endurance performance) as well as the development that took place in technique as a result of repeated performance of exercises for developing skills in addition to agility, which led to the improvement of the results of this test among the members of the experimental group as a result of the correlation of the attribute of endurance skills performance with agility .[15]

Although there was progress in the telemetry of the control group and that this progress was statistically significant because the value of (Wilcoxon) was (2.000) and in statistical significance (0.046), but the researcher attributes this progress to that the traditional approach that was applied to the members of this group was It contains many exercises that work to develop skills, especially the skills of rolling and scoring, in addition to general endurance exercises and strength exercises as well as speed as the high level of general physical characteristics is reflected in the high status of athletic achievement.[15]

Conclusions

1. Adopting aerobic exercises and taking ginseng capsules in approved doses and proportions in preparing programs to develop special endurance capabilities for football players for youth under (19) years.
2. Conducting experimental research to find out the effect of taking ginseng extract for young soccer players in particular on developing physical capabilities that were not covered by the current study.

Ethical Clearance: The Research Ethical Committee at scientific research by ethical approval of both MOH and MOHSER in Iraq

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