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# The effect of regular tempo training according to the average speed of the race stages on speed endurance and the achievement of a $\mathbf{5 0 0 0}$ meter run for ages under 20 years 

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#### Abstract

The study's objectives included developing specialized exercises in the regular rhythm style in accordance with the average race distance stages' speeds ( $400 \mathrm{~m}, 1000 \mathrm{~m}, 2000 \mathrm{~m}$, and 3000 m ) in the 5000 m run, as well as examining the effects of the exercises on speed endurance and the ability to complete the race. It also included a comparison of the tactical style or rhythm to that used on an international scale. The 5000-meter running portion of the competition and the accomplishment included the Iraqi and the research sample. The researchers believe that there is a relationship between accomplishment and the speed endurance training as well as the workouts utilized to measure time for the 5000-meter running portions of the race. On a sample of long-distance running clubs from the Karbala Governorate, the researchers utilized the experimental technique in the way of (equal groups) to fit the nature of the study. They had six runners and athletes in the 2023 sports season. They were split into two experimental groups at random. Three players per group in the control group. In terms of the study's variables, the two groups were equal. The pre-test was finished, and then the research group's training program got under way. The specific preparatory stage of the program lasted for eight weeks and included three training units each week. The speed rates of the race segments determined the intensity of the exercises that were used, and based on the findings, the researchers came to the conclusion that the tactical approach taken to complete the 5000-meter running segments and the completion is influenced by the intensity of the exercises that were used. Don't use a plan of attack or a tactical approach while running the 5000 meters. The race progresses through phases, some of which are marked by an increase in speed, while others remain steady or decelerate, with the last stage always rising. The researchers urge medium- and long-distance running coaches to focus on training the race's intensity in accordance with the rhythm being employed and to regulate the rate of speed for the portions of the race distance by improving the capacity of participants to maintain their pace during the course of the first and second halves of the race.


Keywords: Combining running, plyometric exercises, speed endurance, strength endurance

## 1. Introduction

Athletics is one of the most important sports. Individual games are characterized by a variety of competitions and require bio-motor abilities in addition to high concentration. This makes physical exercises, which are concerned with raising the level of physical fitness, the basic foundation that enables the player to develop and improve his physical and skill level.
It came through scientific and technical development, most notably the efforts of training scientists who tried to exploit human energy using theories and ideas of various pure sciences. Athletics competitions included several types, including running, jumping, jumping, and throwing competitions, and others were running medium and long distances, and each event differed from the other in terms of physical or Technical or tactical in the methods of its performance, and among these events is long-distance running, including the (5000) meter running event, which is considered one of the most vital events, especially in the countries of the Morocco.

This event is characterized by an increase in the effort used (rate of speed) at the beginning of the race and sometimes in the middle of the race, in addition to the quick finish, which requires the runner to change the specifications of the intensity used. In order to achieve a better level of achievement, the method of distributing effort must be taken into account. Through the speed used in the stages of the race, as the distribution of effort depends mainly on the physical fitness elements of each competitor, hence the importance of researching the role of the player's prior strategy in setting how the competitors will pass in each stage of the race, and this also requires the role of the coach in developing that plan.

### 1.1 Research Problem

The level of achievement in the ( 5000 meters) competition at the present time does not meet the ambition if compared to the level of achievement for this competition at the Arab, Asian and international levels, as there are many factors that contributed in one way or another to the low level of runners, and through the researchers' review of various The training programs of most long-distance coaches. Note that most of their training emphasizes high training volumes in developing personal endurance for different distances, without consideration or interest in extracting intensity from the rhythm of the stages or parts of the race. Most of these exercises are not similar to the level of performance, so the researchers delved into this study by preparing exercises in a regular and different rhythm style through exercises based on the regular rhythm of the speed rates of the stages or parts of
the race in the 5000 m running event.

### 1.2 Research objective

1. Preparing special exercises in a regular rhythm style according to the average speed of the race distance stages ( $400 \mathrm{~m}-1000 \mathrm{~m}-2000 \mathrm{~m}-3000 \mathrm{~m}-4000 \mathrm{~m}$ ) in the 5000 m run.
2. Knowing the effect of regular rhythm exercises on speed endurance and running 5000 metres.

### 1.3 Research hypotheses

1. There is an effect of the exercises used on the sense of time for the parts of the race in running the 5000 meters and the completion.
2. There is an effect of the exercises used on speed endurance and running 5000 metres.

### 1.4 Research fields

1.4.1 Human field: Karbala Governorate club players under the age of 20 for the 500 meter competition.

### 1.4.2 Time field: From 15/4/2023 to 20/6/2023.

1.4.3 Spatial field: Olympic Stadium in Kerbala Governorate.

## 2. Research methodology and field procedures 2.1 Research Methodology

The researchers used the experimental method (equal groups) to suit the nature of the research, and Table (1) shows this.

Table 1: Experimental design adopted in the research

| Group | Pre-test | Experimental dealing | Post-test |
| :---: | :---: | :---: | :---: |
| Experimental | Endurance speed and achievement of 5000 metres | Exercises used in research | Endurance speed and achievement of 5000 meters |
| Control |  | Trainer exercises |  |

### 2.2 Community and research sample

The research community was determined from the runners of the Karbala Governorate athletics clubs in long-distance running for the age of under 20 years, who numbered (6) runners and participants in the sports season (2023), where the two groups were equal according to the variables of the study.

### 2.3 Equivalence of the experimental and control groups

Table 2: Shows the calculated and tabulated Mann-Whitney value and the significance of the differences in the variables adopted in the equivalence between the two research groups

| Race stages | Statistical values |  | Mann-Whitney value | z test | Sig level | Sig type |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Experimental | Control |  |  |  |  |
|  | Median | Median |  |  |  |  |
| Ran 2000 metres | 3.08.33 | 3.10.50 | 0.60 | 2.470- | 0.21 | Non sig |
| Achievement of running (5000) metres | 16.56.67 | 16.55.00 | 0.23 | 3.443 | 0.10 | Non sig |

## regarding the variables of the study and the completion of running 5000 metres

The researchers conducted the equivalence process for the experimental and control groups on the sample individuals and variables of the research study and dealt with them statistically through the use of the statistical law of median and interquartile deviation as in Table (2) Stistal

It shows the calculated and tabulated Mann-Whitney value and the significance of the differences in the variables adopted in the equivalence between the two research groups.

- The questionnaire.
- Note
- Testing and measurement.
- Personal interview.
- Manual electronic calculator (SHARP).
- A Pentium 4 computer of Korean origin.


### 2.4 Methods, devices and tools used in the research: The researchers used the following methods, devices and tools

- 3 manual stopwatches (Kislo 610), of Chinese origin.
- Legal track for athletics.
- Various tools (red and white flags, whistle, papers to record data).


### 2.5 Field research procedures

### 2.5.1 Determine tests for special variables in the research

The researchers surveyed many scientific sources related to the research topic and the following tests were determined:

- 2000 m speed endurance test
- Testing the 5000 m running stages


### 2.5.2 Description of tests

### 2.5.2.1 First: A 2000-meter running test

- Objective: Speed endurance test.
- Tools used: playground and field, timing clocks, registration forms.
- Description of performance: Each group's participants take a separate exam. The test starts with the players being told to "Take your place" from a standing posture, followed by the signal to "start and go" and run five laps around the track for a distance of 2000 meters. The time of each participant is then recorded. To the closest millisecond on the registration form.


### 2.5.2.2 Second: Stages of running (5000) meters and achievement

- Objective: Measure the times of the 5000 meter running segments and the final completion.
- Tools used: playground and field, stopwatches (3), registration forms.
- Description of performance: Each group's participants take a separate exam. The test starts when the players hear the command (Take your place) from the starting position while standing, followed by the signal to start and go and run around the track for 5000 meters over 12 turns and 200 meters.
- Timing every 400 metres
- Timing every 1000 metres
- Timing times (2000-3000-4000) sequentially with completion, then recording the time of each competitor in the registration form.


### 2.6 The first exploratory experiment

The purpose of the exploratory experiment is to determine the suitability of the tests for the research sample, the response of the sample to those tests, and the time taken to perform the test, in addition to determining the duties of the assistant work team. Therefore, the exploratory experiment was conducted on a sample of (2) distance running players. Middle school students other than the research sample, as the exploratory experiment was conducted at ten o'clock in the morning on Saturday, corresponding to April 15, 2023, to withstand the speed, and in the evening at six o'clock in the afternoon for stages and parts and the 5,000-meter completion. The purpose is to ensure the suitability of the tools and equipment.

### 2.6.1 The second exploratory experiment regarding the exercises used

After the researchers prepared the research exercises, they conducted a second reconnaissance experiment on Monday, April 17, 2023, at the Karbala Olympic Stadium, and the goal was:

1. Identify the time the training unit takes
2. Identify the exercises and how to perform them
3. Identify the suitability of the exercises for the sample

### 2.7 Scientific foundations for tests

Tests and standards are an important tool for evaluation, and as such they are a tool that is used for all data for the purpose of evaluation. Tests or tools also have good qualities, including achieving scientific transactions, the conditions of which are (Validity, reliability, objectivity).
2.7.1 Validity of the test: (Ibrahim, Marwan Abdel Majeed, 1999, p. 90) ${ }^{[1]}$.
There are many ways to find the validity coefficient, and the
researcher used content validity to determine its validity by selecting it from scientific sources related to the research topic.

### 2.7.2 Test reliability

The reliability of the test means that it gives the same results when the test is repeated more than once for the same sample members on two different days and the researchers used it to find the reliability coefficient of the test through the (test and retest) method, so the researchers applied the tests on 19/4/2023 and the same tests were repeated. With the same conditions that they conducted in the exploratory experiment and on the same sample members on Sunday, April 23, 2023, that is, four days apart from the first test, the researchers extracted the reliability coefficient by applying the simple correlation coefficient (Pearson) between the first and second tests of the tests, and all values of the correlation coefficient were The simplex calculated for all tests is greater than the tabular value at degree of freedom (4) and its value is 0.811 , which confirms that all tests have a high reliability coefficient, as shown in Table (3).

### 2.7.3 Objectivity

The objectivity of the test means that the test is not affected by changing the arbitrators or that the test gives the same results regardless of who is conducting the arbitration, that is, freedom from bias or fanaticism and not introducing the personal factors of the tester or arbitrator such as his opinions, personal whims and personal inclinations. Objectivity means that half of the individual's capabilities are as they exist. Really not what we want it to be.

Table 3: Shows the reliability and objectivity coefficients for the tests under study:

| Tests | Reliability <br> coefficient | Sig type | Objectivity <br> coefficient | Sig <br> type |
| :---: | :---: | :---: | :---: | :---: |
| Test 1 | 0.859 | Sig | 0.896 | Sig |
| Test 2 | 0.871 | Sig | 0.899 | Sig |

### 2.8 Pre-tests

The researchers administered pre-tests to the six runners who made up the research sample, which was split into two control and experimental groups, in order to determine the results of the tests and determine the runners' skill level when putting the regular rhythm exercises that were prepared in the training program. Two days were spent on the testing. The Olympic Stadium in Karbala will be used for testing speed endurance on Wednesday, April 26, 2023, at ten in the morning, and for measuring performance there on Sunday, April 27, 2023, at six in the evening.

### 2.9 Main experiment

The researchers used the analysis and review of a large number of specialized scientific sources and references, as well as the modest experience that the researchers had gained through their practice of athletics, to prepare regular rhythm exercises that will be incorporated into the training program to develop research variables for the experimental group. These features set the workouts apart from others: -

1. The exercises took place during the special pre-planning phase.
2. The training program's workouts started on (Saturday), which corresponds to 4/29/2023.
3. The training program's workouts persisted over an eightweek period.
4. The quantity of training units per week (three units).
5. The total number of training units was 24.
6. Saturday, Monday, and Wednesday make up a 6-day training unit.
7. The researchers utilized both the repeated training method and the high-intensity interval training approach as training techniques.
8. The researchers considered the need for training on the other days of the week to be as similar as feasible for all participants in the study sample in terms of training load components, physical features, and skills.
9. On (21/6/2023), or (Wednesday), the execution of the exercises outlined in the training program was finished.
10. To prepare for the post-tests, the researchers raised the training volume in the experimental group's first, second, and third weeks and reduced it in the fourth week. They then increased it in the fifth, sixth, and seventh weeks and decreased it in the eighth week.

### 2.10 Post-tests

Posttests and measurements were conducted on the research sample for the experimental and control groups after completing the training on $24 / 6 / 2023$, in the same manner in which the pretests and post-test were conducted.
2.11 Statistical methods: The researchers resorted to choosing statistical methods relevant to comparing the results of pre- and post-tests, and they used the SPSS statistical package system.

## 3. Presentation, analysis and discussion of the results 3.1 Presentation and analysis of the results of the race and completion stages for the experimental and control groups in running (5000) metres

Table 4: Shows the median, interquartile deviation, calculated and tabulated Wilcoxon value, and the significance of the differences in the preand post-tests of the experimental group in the times of running (5000) meters and the achievement.

| Race parts stages | Test |  |  |  | Calculated Wilcoxon value (z). | Sig Level | Sig Type |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Pre |  | Post |  |  |  |  |
|  | Median | quartile deviation | Median | quartile deviation |  |  |  |
| 200 meters | 34 | 2.5 | 33 | 1.5 | 1.490- | 0.04 | Sig |
| The first 400 M | 78 | 1.5 | 77 | 2 | 2.032- | 0.04 | Sig |
| The second 400 M | 79 | 1 | 80 | 0.50 | 2.121- | 0.03 | Sig |
| The third 400 M | 78 | 2 | 76 | 1 | 0.816- | 0.03 | Sig |
| The fourth 400 M | 78 | 1.5 | 80 | 1 | 1.633- | 0.04 | Sig |
| The fifth 400 M | 79 | 1 | 78 | 0.55 | 2.121- | 0.03 | Sig |
| The sixth 400 M | 79 | 2.5 | 78 | 1.5 | 2.023- | 0.04 | Sig |
| The seventh 400 M | 80 | 1 | 80 | 1 | 2.060- | 0.04 | Sig |
| The eighth 400 M | 78 | 1 | 78 | 0.60 | 2.032- | 0.04 | Sig |
| The ninth 400 M | 81 | 1.5 | 80 | 1 | 2.060- | 0.04 | Sig |
| The tenth 400 M | 81 | 1.5 | 80 | 1 | 2.041- | 0.04 | Sig |
| The eleventh 400 M | 80 | 2 | 78 | 1.5 | 2.041- | 0.04 | Sig |
| The Twelfth 400 M | 79 | 1 | 77 | 0.55 | 1.490- | 0.04 | Sig |
| Achievement | 16.56.67 | 1.5 | 16.25.00 | 1 | 2.032- | 0.04 | Sig |

Given that there were variations between the pre- and posttests, Table (4) displays the findings of the pre- and post-tests for the experimental group's timings of the race and finish phases. The Wilcoxon test was used to determine the significance of the differences between the pre- and post-tests for this group, and the findings indicated the existence of significant differences. The significance threshold was lower
between the two tests and in favor of the post-test ( 0.05 ).
The differences between the pre- and post-tests for the control group in the timings of running (5000) meters and the Achievement test are shown in Table (5) along with the median, interquartile deviation, computed and tabulated Wilcoxon value, and the significance of the changes.

Table 5: Shows the results of the pre- and post-tests for the average race segment stages and completion for the control group.

| Race parts stages | Test |  |  |  | Calculated Wilcoxon value (z). | Sig Level | Sig Type |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Pre |  | Post |  |  |  |  |
|  | Median | quartile deviation | Median | quartile deviation |  |  |  |
| 200 meters | 36 | 2.5 | 34 | 1.5 | 1.330- | 0.04 | Sig |
| The first 400 M | 77 | 1.5 | 76 | 2 | 2.032- | 0.04 | Sig |
| The second 400 M | 80 | 1 | 79 | 2 | 2.115- | 0.03 | Sig |
| The third 400 M | 78 | 2 | 80 | 0.50 | 0.666- | 0.03 | Sig |
| The fourth 400 M | 82 | 1.5 | 81 | 1 | 1.553- | 0.04 | Sig |
| The fifth 400 M | 81 | 1 | 79 | 1 | 2.112- | 0.03 | Sig |
| The sixth 400 M | 81 | 2.5 | 80 | 0.55 | 2.023- | 0.04 | Sig |
| The seventh 400 M | 81 | 1 | 80 | 1.5 | $2.040-$ | 0.04 | Sig |
| The eighth 400 M | 79 | 1 | 79 | 1 | 2.012- | 0.04 | Sig |
| The ninth 400 M | 80 | 1.5 | 80 | 0.60 | 2.022- | 0.03 | Sig |
| The tenth 400 M | 79 | 1.5 | 80 | 1 | $2.031-$ | 0.03 | Sig |
| The eleventh 400 M | 80 | 2 | 78 | 1 | 2.051- | 0.04 | Sig |
| The Twelfth 400 M | 79 | 1 | 77 | 1.5 | 1.330- | 0.04 | Sig |
| Achievement | 16.55 | 1.5 | 16.38.33 | 0.55 | 2.042- | 0.04 | Sig |

Table (5) shows the results of the pre- and post-tests for the average race segment stages and completion for the control group. It showed that there were differences between the preand post-tests. For the purpose of testing the significance of the differences for the pre- and post-tests for this group, the Wilcoxon test was used, and the results showed that there were significant differences. Between the two tests and in
favor of the post-test, the significance level was lower (0.05). Table (6) shows the median, interquartile deviation, calculated and tabulated Wilcoxon value, and the significance of the differences in the pre- and post-tests of the experimental group in the average speed of the (5000) meters running parts and the achievement.

Table 6: Shows the results of the pre- and post-tests for the experimental group in the average speed of the race parts and the completion of the experimental group, as there were differences between the pre- and post-tests.

| Race parts stages | Test |  |  |  | Calculated Wilcoxon value (z). | Sig Level | Sig Type |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Pre |  |  |  |  |  |  |
|  | Median quartile deviation Median quartile deviation |  |  |  |  |  |  |
| 200 meters | 5.88 | 2.5 | 6.06 | 1.5 | 1.430- | 0.04 | Sig |
| The first 400 M | 5.13 | 1.5 | 5.19 | 2 | $2.034-$ | 0.04 | Sig |
| The second 400 M | 5.06 | 1 | 5.00 | 2 | 2.121- | 0.03 | Sig |
| The third 400 M | 5.13 | 1 | 5.26 | 1.5 | 0.616- | 0.03 | Sig |
| The fourth 400 M | 5.13 | 1.5 | 5.00 | 1 | 1.533- | 0.04 | Sig |
| The fifth 400 M | 5.06 | 2 | 5.13 | 1 | 2.121- | 0.03 | Sig |
| The sixth 400 M | 5.06 | 2 | 5.13 | 2.5 | 2.022- | 0.04 | Sig |
| The seventh 400 M | 5.00 | 2.5 | 5.00 | 1,5 | 2.060- | 0.04 | Sig |
| The eighth 400 M | 5.13 | 1.5 | 5.13 | 1 | $2.042-$ | 0.04 | Sig |
| The ninth 400 M | 4.94 | 1 | 5.00 | 1 | 2.060- | 0.04 | Sig |
| The tenth 400 M | 4.94 | 1 | 5.00 | 2 | 2.031- | 0.04 | Sig |
| The eleventh 400 M | 5.00 | 2 | 5.13 | 1,5 | 2.041- | 0.04 | Sig |
| The Twelfth 400 M | 5.06 | 1.5 | 5.19 | 1,5 | 1.420- | 0.04 | Sig |
| Achievement | 5.03 | 1.5 | 5.12 | 1 | 2.032- | 0.04 | Sig |

Table 7: Shows the median, interquartile deviation, calculated and tabulated Wilcoxon value, and the significance of the differences in the preand post-tests for the control group in the average speed of the (5000) meter running segments and the achievement.

| Race parts stages | Test |  |  |  | Calculated Wilcoxon value (z). | Sig Level | Sig Type |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Pre |  | Post |  |  |  |  |
|  | Median | quartile deviation | Median | quartile deviation |  |  |  |
| 200 meters | 5.56 | 2.5 | 5.88 | 1.5 | 1.330- | 0.04 | Sig |
| The first 400 M | 5.19 | 1.5 | 5.26 | 2 | 2.032- | 0.04 | Sig |
| The second 400 M | 5.00 | 2.5 | 5.06 | 2 | 2.115- | 0.03 | Sig |
| The third 400 M | 5.13 | 1.5 | 5.00 | 1.5 | 0.666- | 0.03 | Sig |
| The fourth 400 M | 4.88 | 1 | 4.94 | 1 | 1.553- | 0.04 | Sig |
| The fifth 400 M | 4.94 | 1 | 5.06 | 1 | 2.112- | 0.03 | Sig |
| The sixth 400 M | 4.94 | 1.5 | 5.00 | 2.5 | 2.023- | 0.04 | Sig |
| The seventh 400 M | 4.94 | 2 | 5.00 | 1,5 | 2.040- | 0.04 | Sig |
| The eighth 400 M | 5.06 | 2 | 5.06 | 1 | 2.012- | 0.04 | Sig |
| The ninth 400 M | 5.00 | 2.5 | 5.00 | 1 | 2.022- | 0.03 | Sig |
| The tenth 400 M | 5.06 | 1.5 | 5.00 | 2 | 2.031- | 0.03 | Sig |
| The eleventh 400 M | 5.00 | 1 | 5.13 | 1,5 | 2.051- | 0.04 | Sig |
| The Twelfth 400 M | 5.06 | 1 | 5.19 | 1,5 | 1.330- | 0.04 | Sig |
| Achievement | 5.03 | 2 | 5.08 | 1 | $2.042-$ | 0.04 | Sig |

Table (7) shows the results of the pre- and post-tests for the experimental group in the average speed of the race parts and the completion of the control group, as there were differences between the pre- and post-tests.

## 4. Discussing the results of the race parts and achievement stages for the experimental and control groups in running (5000) metres

There were noticeable disparities between the experimental and control groups in the pre- and post-test, favoring the posttest, as shown by the findings that were shown in the table above about the timings of the race and completion sections. The results showed that there were significant differences between the two tests and in favor of the experimental group that underwent exercises based on scientific foundations in terms of intensity, volume, rest periods, and in the race rhythm style. After the intensity of the exercises was extracted from the average, the researchers attributed these differences
to the effect of the training that both groups underwent as these differences appeared in the stages of the race. Significant variations between the two groups' distributions of effort for each session (400) or in ( $1000 \mathrm{~m}-2000 \mathrm{~m}-3000$ $\mathrm{m}-4000 \mathrm{~m}$ ) occurred before and after running 5000 meters.
The result of the special training in running 5000 meters in the special stage, as well as the method used in training the experimental group, by using exercises according to the intensity of the race and for each part of the competition, based on scientific foundations and taking into account the ability of the sample members, which resulted in differences appearing between the pre- and post-tests for both groups, The researchers attribute the reason for this to the fact that the competitors exert a high effort (high speed) at the beginning and end of the race that does not match their physical abilities, as the quick start leads to the appearance of early fatigue in them, which affects the rest of the race distance. The longdistance racer who races quickly in order to lead his group
finds himself falling behind or at the back of the race by the end of the race. The lack of advance planning by the racer in the race, the lack of development of aerobic and anaerobic capabilities, and his weak ability to distribute effort over the required distance, result in a lack of sensitivity to the speed used for the end parts of the race. The last (1000m-400m) appeared in an unstable manner, as the differences in the sessions appeared significant, and this does not agree with high level competitors. They cover the last 1000 miles of the race at an increasing speed until the finish line to achieve the best possible result. This may be due to the lack of focus within the training curricula on running different distances higher than the intensity of the race or at the race level, as well as the lack of auxiliary devices to develop the feeling or sense of speed for parts of the race (running with a fixed timing), or the lack of rest periods to return to a normal state (the recovery phase). The lack of rest periods to return to normal (recovery phase), and even our athletes are not accustomed to the start and finish speed in long-distance running races as a result of the lack of focus in the training units on exercising under the requirements of lactic acid concentration, and this is what works within the curricula of world champions, which puts them at the level high in racing as a result of the adaptation that accompanied the muscular and respiratory systems.

## 5. Conclusions and recommendations

### 5.1 Conclusions

1. There is an effect in the intensity training used according to the pace of the race in developing the variables (under study)
2. Significant differences appeared between the two research groups in the post-test for the variables (endurance for speed and achievement) and in favor of the experimental group.
3. There is an impact in the intensity training used according to the rhythm of the race on the tactical method
used in completing the 5000 meter running parts and the achievement.
4. Most of the competitors used a faster pace than the first half of the race for the research sample.

### 5.2 Recommendations

1. The need to pay attention to developing the ability to control the rate of speed for parts of the race distance by developing the ability of competitors to maintain their speed between the first and second half.
2. Using analytical methods and devices for the players of our national athletics teams for the purpose of comparing their tactical style with the international level.

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## 7. Appendix

Exercises prepared by the researchers
Shows the exercises used for the study sample in the 5000 meter running competition

| Exercises | Week | Training volume per week | Intensity | Training unit | Day | Rest time | Exercises |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | First | 7600 M | 75 \% | 1 | Saturday | Pulse returns to normal | $3 \times 1200 \mathrm{M}$ |
|  |  |  | 80 \% | 2 | Monday |  | $2 \times 4 \times 200 \mathrm{M}$ |
|  |  |  | 85 \% | 3 | Wednesday |  | $\times 2 \times 4003 \mathrm{M}$ |
| 2 | Second | 8600 M | 80 \% | 4 | Saturday |  | $4 \times 2 \times 200 \mathrm{M}$ |
|  |  |  | 85 \% | 5 | Monday |  | $5 \times 200 \mathrm{M}$ |
|  |  |  | 90 \% | 6 | Wednesday |  | + |
| 3 | Third | 9600 M | 75 \% | 7 | Saturday |  | $5 \times 150 \mathrm{M}$ |
|  |  |  | 80 \% | 8 | Monday |  | $5 \times 2 \times 300 \mathrm{M}$ |
|  |  |  | 85 \% | 9 | Wednesday |  | $2000 \times 2$ |
| 4 | Fourth | 7600 M | 85 \% | 10 | Saturday |  | $4 \times 150 \mathrm{M}$ |
|  |  |  | 90 \% | 11 | Monday |  | + |
|  |  |  |  | Achievement Ch |  |  |  |
| 5 | Fifth | 6600 M | 80 \% | 13 | Saturday |  | $4 \times 2 \times 150 \mathrm{M}$ |
|  |  |  | 85 \% | 14 | Monday |  | $3 \times 2 \times 400 \mathrm{M}$ |
|  |  |  | 90 \% | 15 | Wednesday |  | $4 \times 600 \mathrm{M}$ |
| 6 | Sixth | 7600 M | 85 \% | 16 | Saturday |  | Thursday |
|  |  |  | 90 \% | 17 | Monday |  | $4 \times 150 \mathrm{M}$ |
|  |  |  | 95 \% | 18 | Wednesday |  | + |
| 7 | Seventh | 8600 M | $75 \%$ | 19 | Saturday |  | $2 \times 200 \mathrm{M}$ |
|  |  |  | 80 \% | 20 | Monday |  | $4 \times 400 \mathrm{M}$ |
|  |  |  | 85 \% | 21 | Wednesday |  | $4 \times 600 \mathrm{M}$ |
| 8 | Eighth | 6600 M | 85 \% | 22 | Saturday |  | $\times 4004 \mathrm{M}$ |
|  |  |  | 90 \% | 23 | Monday |  | $5 \times 300 \mathrm{M}$ |
|  |  |  | 95 \% | 24 | Wednesday |  | $4 \times 200 \mathrm{M}$ |

