

THE IMPACT OF A SUGGESTED TRAINING PROGRAM FOR BIOMETRIC TRAINING TO DEVELOP SOME PHYSICAL AND MOTOR ABILITIES FOR THE GROUP OF YOUTHS IN FOOTBALL

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Abstract

This study aims at exploring the impact of a biometric program to develop certain physical and motor abilities for the group of youths in football. The sample of the research consists of (20) players of youth groups of Afak Club that has participated in the Iraqi first League season. The training method has been used after dividing the sample into two groups: experimental and control, (10) player for each one as well as for the pretest and the post-test. The period of the training method lasts for (8) weeks, (3) units per a week. (L) is used for cross-linked samples to be acquainted with the difference between pre/post measurement of tests under study, as well as in accordance with each one of these groups; (L) test is used for independent samples in favor of finding differences among the individuals of the two groups (the experimental and control) for pre-measurement. It is shown that there are significant differences at the level of significance (0.05) between pretest and posttest for the impact of the program under study for the experimental group to develop some physical and motor abilities. There are also some significant differences at the level of significance (0.05) for post-measurement between experimental and control groups for the same purpose concerning the sample of the research and in the interest of the experimental group. It is highly recommended by the researchers that the biometric program as a means of promoting and improving physical and motor abilities for the group of youths in football.

Keywords: Sports Exercise. Biometric training. Physical and motor abilities. Youth football.

Introduction

Football is considered as one of the most popular game spreading all over the world. Experts, specialist and people of concern have attempt to find the best ways, styles and scientific tools by means of using studies and scientific researches by which they have greatly developed this sport to get to the present level on the universal scale and surprisingly, especially among nations and states during World and continental championships (Jasim, 2014).

Al-Mawla. (2010) affirms that coaches should establish their training programs on the results of modern scientific research and the necessity of linking athletic training to all fields of knowledge. It is strongly confirmed that the physical and motor abilities represent the most important basis in the training process upon which completing the ingredients and other elements of training are built. Achieving high levels of performance closely links to the player's ability to attain high stages of physical abilities (Hassanien & Abdel-Moneim, 1997).

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There are some other various requirements needed in all sport activities. They differ in accordance with the activity practiced, for each sport has its own characteristic features. Physical and motor abilities are also regarded as part of these requirements, being also different from one activity to another (and part of physical fitness as a whole). This includes all social, psychological, health and physical aspects (Hussein & Salih, 2022; Alwan, 2021; Alwan, 2022). This is due to the fact that the human body is a complete unit which needs running and jumping practiced (Abd, 2022). Experts and theorists see that biometric trainings are regarded as trainings of rapid movements, enabling the muscular groups to get to the maximal power at the least period of time. It is this mechanism which is considered to be responsible for increasing the effectiveness of training. Hence, they recommend working on these trainings.

The Problem of the Research

In view of the experience of researchers and experts in the field of athletic training, in general, and in football training, in particular, it is noticed that most of football league of first division clubs for youths follow certain scientific bases as well as the principles of traditional athletic training (Hussein et al., 2022). In other words, the coaches of this sector have still been using the most classical training programs which are repetitive and well-known for and for long times, with no sense of variety or mixing between the different methods of training. We can find many different methods of training practiced in the playground without any simple and inexpensive tools. Sometimes, the weight of the player's body is used and other trainings which the player needs, however ineffective for the group of youths these trainings are. Unlike classical methods of training, biometric trainings which is regarded as one of the most well-known methods currently used at the present time for developing muscular abilities, being largely used for improving power and speed together. This sort of training biometric training highly increases power and speed at the same time, if compared with the classical method previously.

Consequently, this study is highly recommended as it attracts attention to the group of youths and helps in building modern training programs for every biometric training. This is due to the fact that such modern training programs can attract the players of this group and promote the level of their physical and motor abilities.

Methodology of the Research

The experimental method is used in this paper to design the experimental and control equivalent groups in both pretest and posttest measurements because it greatly suits the nature of the research.

The Community and Sample of the Research:

The community of the research includes the players of the teams participating in the Iraqi Youth Football League 2020-2021, the Middle Region, (8) teams. As for the sample of the research, it consists of (25) players of Afak Athletic Club participating in the Iraqi First Youth Football League who are registered in the Iraqi Federation of Football (selected according to the intentional method). The three goalkeepers have been excluded from the sample of the research and two other players because of injury. The sample has been divided into two groups by lottery.

Equivalence among Individual of the Groups

For the verification of the equivalence of the two groups (the experimental and control), the (L) is used for the independent samples to discover the differences between the experimental and control groups in the pretest measurement of the physical and motor abilities for the sample of the research after verifying the availability of the conditions of this type of tests such as the equilibrium of distribution and of the homogeneity of the variance of the research sample as in table 1 (Table 1).

The data in Table 1 indicate that there are no statistically significant differences at the significance level (0.05) for the pretest measurement of the physical and motor abilities according to the variable of the experimental and control groups of (L) value at the level of significance, showing the equivalence of the two groups before carrying out the program. Equivalence of the individuals of the two groups is also verified according to the variables of age, height, weight and training age, Table 2 indicates these results (Table 2).

Table 2 indicates the results of (L) Test of independent samples to verify the equivalence between groups in the variables of age, height, weight and training age. The results in Table 2 indicate that there are no statistically significant differences at the level of significance (0.05) between the experimental and control groups in terms of L value at the level of the accompanying significance.

Table 1: L Test for Independent Samples to Verify Equivalence Among the Individuals of the Two Groups in the Pretest Measurement of Physical and Motor Abilities in Football.

| Sequence | Characteristics and Abilities | Tests | Group | Arithmetic Means | Standard Deviation | L Value | Level of Significance |
|----------|-------------------------------|---|--------------|------------------|--------------------|---------|-----------------------|
| 1 | Arms Explosive Power | Pushing the Soft Ball From the State of Stability | 0.97 | 1.11 | 0.50 | 2.61 | Experimental |
| 5.51 | 2.62 | Control | | | | | |
| 2 | Legs Explosive Power | Long Jump Stability Test | 0.82 | 2.66 | 0.25 | 1.81 | Experimental |
| 0.21 | 1.79 | Control | | | | | |
| 3 | Power Distinguished by Speed | Arm Extension and Flexion 30 Seconds | 0.52 | 0.92 | 3.44 | 19.33 | Experimental |
| 2.58 | 20.05 | Control | | | | | |
| 4 | Power Distinguished by Speed | Sitting from the Prone 30 Seconds | 0.48 | 0.88 | 2.17 | 23.44 | Experimental |
| 2.11 | 22.95 | Control | | | | | |
| 5 | Speed | Running Test 30 m | Experimental | 0.68 | 0.91 | 0.47 | 5.74 |
| 0.59 | 5.61 | Control | | | | | |
| 6 | Endurance | Cobber Test | Experimental | 0.74 | 2.44 | 321.25 | 2258.89 |
| 262.05 | 2262.35 | Control | | | | | |
| 7 | Agility | Zigzag Running 25 m | Experimental | 0.58 | 0.69 | 0.75 | 13.04 |
| 0.71 | 13.21 | Control | | | | | |
| 8 | Flexibility | Bending the Torso Forward from Sitting | 0.46 | 0.77 | 4.99 | 33.84 | Experimental |
| 5.81 | 32.73 | Control | | | | | |

Table 2: Indicates the results of (L) Test of independent samples to verify the equivalence between groups in the variables of age, height, weight and training age.

| Sequence | Test | Sample | Measurement | Arithmetic Means | Standard Deviation | Degrees of Freedom | L Value | Level of Significance |
|--------------|--------------|--------------|-------------|------------------|--------------------|--------------------|---------|-----------------------|
| 1 | Age | Control | Year | 0.36 | 16.84 | 18 | 0.95 | 0.74 |
| Experimental | 0.41 | 16.91 | | | | | | |
| 0.51 | 0.89 | 0.51 | 164.62 | Height | Control | cm | 2 | |
| 0.19 | 163.98 | Experimental | | | | | | |
| 0.32 | 1.21 | 5.84 | 60.38 | Weight | Control | kg | 3 | |
| Experimental | 4.22 | 60.23 | | | | | | |
| 4 | Training Age | Control | Year | 0.39 | 1.28 | 1.23 | 1.80 | |
| Experimental | 1.01 | 2.15 | | | | | | |

This means that the individuals of the two groups are equivalent in each one of the variables (age, weight, height and training age) before carrying out the program.

Means, Devices and Tools Used in the Research

The Resources Used:

Arabic and English References, Personal Interviews, Internet Information, Assistant Team Work

Devices and Tools Used: An Electronic Timer Watch, A Device for Measuring Weight and Height, Signs, Federation Footballs, A Whistle, Gypsum, and Linen Tape Measure

The Pilot Experiment:

The Pilot Experiment is regarded as something essential to the extent of the validity of the test of the main experiment, specifying the community of origin or the type of the test and a small sample of this community to conduct the experiment (Wajih Mahjoub, 1995). An experiment on a sample outside the research sample has been conducted by the researchers of this paper: the extraneous sample consists of (5) players of Al-Itifaq Athletic Club/ The Youths Group. It took place on Saturday and Sunday, 20-21th, November, 2020, 2:00 pm. This has been done for the sake of defining the efficiency of the devices and their validity for conducting the tests, the required time for the test, and the readiness of the assistant team work.

The Scientific Transactions for the Test of THE Study

First: Veracity of Tests;

The test of this study has been presented to a number of arbitrators and experts of specialty to confirm the objective of these tests, the extent of their validity, their suitability for the measurement of the variables of the study. It is worth adding that the percentage relied upon is 90%. Appendix B shows the names of arbitrators and experts, their scientific specialty and places of job.

Table 3: Pearson's Correlation Coefficient for Application as an Indicator of the Constancy of the Study.

| Sequence | Characteristics and Abilities | Tests | Pearson's Correlation Coefficient |
|----------|-------------------------------|--|-----------------------------------|
| 1 | Arms Explosive Power | Pushing the Smooth Ball from Stability | 0.82 |
| 2 | Legs Explosive Power | Long Jump Stability Test | 0.85 |
| 3 | Power Distinguished by Speed | Arms Extending and Bending 30 seconds | 0.91 |
| 4 | Power Distinguished by Speed | Sitting from Prone 30 seconds | 0.81 |
| 5 | Speed | Running Test 30 m | 0.80 |
| 6 | Endurance | Cooper Test | 0.78 |
| 7 | Agility | Zigzag Running 25m | 0.78 |
| 8 | Flexibility | Bending the Torso Forward from Sitting | 0.88 |

Second: Constancy of Tests;

Constancy of tests has been verified by means of testing and the repetition of its application. This took place in 14-15, December, 2020 on a pilot sample of (5) players selected from Al-Itifaq Club players/ Youths Group. Then, the repetition of applying the tests in 19-20, December, 2020 on the sample after four days. Pearson's Correlation Coefficient has been extracted. Table 3 indicates these results (Table 3).

In Table 3, the data show that the coefficients of the constancy of study - Pearson's Correlation Coefficient - between the first and second measurement used in the study are (0.78-0.91). Such values are regarded as acceptable for the purpose of this study.

Procedures of Carrying out the Study

Pretests of Physical and Motor Abilities

The pretests have been conducted by the researchers on the sample of the research, after confirming the veracity and constancy of these tests. They took place 20-21, December, 2020. On the first day, the pretest of (height, age, weight and training age) of physical abilities were conducted, while on the second day the pretests of motor abilities were done.

Application of the Methodology of the Research

After confirming the equivalence of both of the sample of pretest measurements and the variables of (height, age, weight and training age) of the experimental and control research sample, the training program has been applied. The training program consists of (24) training units, 3 units per a week by using biometric training, with 16 training units for the control group. The various biometric training exercises have been used in the training program, together with a sense of gradation of the account of loads. Ripples in the training process have been used with dividing loads and stresses in accordance with the capacity of the research sample and on the basis of the stage of age. The program started on 25, December, 2020 and ended on 16, February 2021 (the eighth week).

The Posttests

After the completion of the suggested training program by the researchers on the research sample, the posttests were conducted on 19-20 February, 2021 under the same conditions for the sake of arriving at the most precise results, with the same order of the pretests.

Statistical Treatments

The (SPSS) has been used by the researchers to arrive at the required statistical results of the research.

3- Presentation and Discussion of the Results

3.1 Presentation and Discussion of the Experimental Group

(L) Test has been conducted by the researchers for the linked groups to find out the differences between the pretest and posttest for the experimental group according to both the physical and motor abilities. Table 4 shows the results (Table 4).

At the degree of freedom (9) and the level of significance (0,05) the data in Table 4 show the presence of statistically significant differences at the level of significance (0.05) between the pretest measurement and that of the posttest for the experimental group in term of the (L) value and the accompanying level of significance for each of the tests of physical and motor abilities. In the interest of the measurement of the posttest. The volume of the impact appears clearly. It is seen by the researchers that the period of the suggested training

program by using biometric trainings for (8) weeks is adequate and good as far as the sample of the research is concerned. Additionally, there is the use of modern training means and tools whose employment has not become little in the training program of this group. In fact that program contains certain trainings with rapid movements which enable the muscular groups to get to the maximal power at the least possible time. It is this mechanism which increases the effectiveness of the biometric training. For example, when an athlete makes a wide jump from the box to the ground, a sudden lengthening or a central contraction of the quadriceps muscle will take place, leading to stimulate the work of the muscle spindles and muscle contraction to avoid additional lengthening. At the same time, the player voluntarily tightens the muscle to bounce upwards. The voluntary nerve signals resulting from reflex reaction gather and increase the speed of muscle contraction, and, consequently the increase of the muscular power. Al-Tanahi (2000) adds saying that the biometric training makes use of the stored energy and power because of the contraction and elasticity and then, then suddenly and instantaneously released to produce a huge explosive power. This type of training includes a rapid lengthening of the muscles in the state of contraction in the central shortening to produce a movement distinguished by the most maximal force and the least period of time.

It is noticed by the researchers that the suitability of the training content of stress and repetitions and in-between intervals of rest and even the rest among groups for this sample is a strong factor helping to develop the physical and motor abilities as well as an avoidance of sport injury at the same time, in addition to the attendance of the sample and not to miss the exercises. This is all due to the scientific interesting method, as well as giving the opportunity for all the players to practice these hew tools. It is also seen that this has also contributed greatly to the process of developing physical and motor abilities for the sample of the research, and consequently leading to the presence of statistically significant differences at the level of significance (0.05) between the pretests and posttest for the experimental group and in the interest of the measurement of the posttest.

This study is in agreement with that of Nour-aldeen and Hamza (2017), Shouqi and Rasheed (2016) whose results have shown that there are some statistically significant differences at the level of significance (0.05) between the pre/post measurement for the experimental group and in the interest of the posttest measurement.

Presentation and Discussion of the Results of the Control Group

The (L) Test has been conducted to the linked groups to reveal the differences between the pretests and posttest for the control group in accordance with the physical and motor abilities. Table 5 indicates these results (Table 5).

The data in Table 5 show that there are some statistically significant differences at the level of significance (0,05) between the pre- and post- measurements for the experimental group in terms of (L) Value and the level of significance

Table 4: finding out Differences between the Pretest and Posttest for the Experimental Groups accords the physical and motor abilities.

| Sequence | Characteristics and Abilities | Tests | Test | Arithmetic Means | Standard Deviation | Degrees of Freedom | L Value | Level of Significance | Volume of Impact |
|----------|-------------------------------|--|--------|------------------|--------------------|--------------------|---------|-----------------------|------------------|
| 1 | Explosive Power | Pushing the Smooth Ball from Stability | 89.35% | Random | 6.44 | 18 | 0.50 | 2.61 | Pre |
| 0.74 | 4.00 | Post- | | | | | | | |
| 2 | Legs Explosive Power | Long Jump Test from Stability | 84.02% | Random | 7.33 | 18 | 0.25 | 1.81 | Post- |
| 0.22 | 2.09 | Post- | | | | | | | |
| 3 | Power Distinguished by Speed | Arms Extension and Bending 30 seconds | 91.19% | Random | 10.31 | 18 | 3.44 | 19.33 | Pre- |
| 3.19 | 25.76 | Post- | | | | | | | |
| 4 | Power Distinguished by Speed | Sitting from Prone 30 seconds | 84.56% | Random | 7.56 | 18 | 2.17 | 23.44 | Pre- |
| 2.44 | 29.08 | Post- | | | | | | | |
| 5 | Speed | Running Test 30m | 76.09% | Random | 5.38 | 18 | 0.47 | 5.74 | Pre- |
| 0.51 | 4.75 | Post- | | | | | | | |
| 6 | Endurance | Cooper Test | 70.89% | Random | 4.74 | 18 | 321.25 | 2258.89 | Pre- |
| 2.22.14 | 2531.12 | Post- | | | | | | | |
| 7 | Agility | Zigzag Running 25m | 70.28% | Random | 5.66 | 18 | 0.75 | 13.04 | Pre- |
| 0.71 | 11.41 | Post | | | | | | | |
| 8 | Flexibility | Bending the Torso Forward from Sitting | 88.24% | Random | 8.04 | 18 | 4.99 | 33.84 | Pre- |
| 2.88 | 40.12 | Post | | | | | | | |

Table 5: At degree of freedom (9) and level of significance (0,05). Table (5): Uncovering the Differences between the Pretest and Posttest of the Experimental Group in accordance with both the Physical and Motor Abilities.

| Sequence | Characteristics and Abilities | Tests | Test | Arithmetic Means | Standard Deviation | degrees of Freedom | (L) Value | Level of Significance | volume of Impact |
|----------|--|---|--------|------------------|--------------------|--------------------|-----------|-----------------------|------------------|
| 1 | Arms Explosive Power | Pushing the Smooth Ball from Stability | 43.05% | Random | 5.35 | 18 | 5.51 | 2.62 | Pre- |
| 0.47 | 3.28 | Post- | | | | | | | |
| 2 | Leg Explosive Power | Long Jump Test from Stability | 53.88% | Random | 4.25 | 18 | 0.21 | 1.79 | Pre- |
| 0.22 | 1.83 | Post- | | | | | | | |
| 3 | Distinctive Power of the Arms 30 seconds | Extension and Bending of the Torso from Sitting | Pre- | 6.19 | 18 | 2.58 | 20.05 | Random | 76.11 |
| 104 | Power Distinguished by Speed | Sitting from Prone 30 seconds | 78.34% | Random | 6.58 | 18 | 2.11 | 22.95 | Pre- |
| 2.99 | 25.84 | Post- | | | | | | | |
| 5 | Speed | Running Test 30m | 70.89% | Random | 5.66 | 18 | 0.59 | 5.61 | Pre- |
| 0.74 | 5.48 | Post- | | | | | | | |
| 6 | Endurance | Cooper Test | Pre- | 4.21 | 18 | 262.05 | 2262.35 | Random | 43.02 % |
| 284.22 | 2352.41 | Post- | | | | | | | |
| 7 | Agility | Zigzag Running 25m | 53.21% | Random | 2.68 | 18 | 0,71 | 13.21 | Pre- |
| 0.62 | 12.81 | Post- | | | | | | | |
| 8 | Flexibility | Forward Bending of the Torso from Sitting | 52.44% | Random | 4.13 | 18 | 5.81 | 32.73 | Pre- |
| 6.14 | 34.41 | Post | | | | | | | |

Table 6: L Test for independent samples to uncover differences in the post application between the two groups at the degree of freedom (18) and level of significance (0.05).

| Sequence | Characteristics and Abilities | Tests | Test | Arithmetic Mean | Standard Deviation | Degrees of Freedom | L Value | Level of Significance | Volume of Impact |
|----------|-------------------------------|---------------------------------------|--------------|-----------------|--------------------|--------------------|---------|-----------------------|------------------|
| 1 | Arms Explosive Power | ushing the Smooth Ball from Stability | 24.12% | Random | 2.49 | 18 | 0.74 | 4.00 | Experimental |
| 0.47 | 3.28 | control | | | | | | | |
| 2 | Leg Explosive Power | Wide-Jump Test | 22.41% | Random | 2.89 | 18 | 0.22 | 2.09 | Experimental |
| 0.22 | 1.83 | Control | | | | | | | |
| 3 | Power Distinguished by Speed | Arms Extension and Bending 30 | 12.05% | Random | 2.20 | 18 | 3.19 | 25.76 | Experimental |
| 2.84 | 22.47 | Control | | | | | | | |
| 4 | Power Distinguished by Speed | Sitting from Prone 30 seconds | 32.51% | Random | 3.42 | 18 | 2.44 | 29.08 | Experimental |
| 2.99 | 25.84 | Control | | | | | | | |
| 5 | Speed | Running Test 30m | 45.65% | Random | 3.25 | 18 | 0.51 | 4.75 | Experimental |
| 0.74 | 5.48 | Control | | | | | | | |
| 6 | Endurance | Cooper Test | Experimental | 2.24 | 18 | 2.22.14 | 2531.12 | Random | 19.01 % |
| 284.22 | 2352.41 | Control | | | | | | | |
| 7 | Agility | Zigzag Running 25m | 47.68% | Random | 4.78 | 18 | 0.71 | 11.41 | Experimental |
| 0.62 | 12.81 | Control | | | | | | | |
| 8 | Flexibility | Bending the Torso from Sitting | 27.34% | 0.02 | 3.12 | 18 | 2.88 | 40.12 | Experimental |
| 6.14 | 34.41 | Control | | | | | | | |

accompanying it for both the of the tests of physical and motor abilities and in the interest of the posttest measurement. The volume of the impact calculated appears clearly. The researchers relate the reason to the fact that the period of applying the normal program which (8) weeks was good as far as the development of physical and motor abilities for the control group as well as because of its suitability prepared by the coach in terms of trainings and exercises, their variety and gradation which are appropriate for the training state of the individual. Competition. Excitement and arousal of the players' interest, the participation of a great number of them in performance and the application of the skills under study and at the same time are all important in this respect. This study is in agreement with the studies conducted by Nour-eldeen and Hamza (2017) as well as Shouqi and Rasheed (2016) whose results have shown that there are some statistically significant differences at the level of significance (0,05) between the pre- and post-measurement for the control group and in the interest of the posttest.

The Presentation and Discussion of the Results of the Experimental and Control Groups (Table 6). The data in Table 6 indicate that there are some statistically significant differences at the level of significance (0,05) between the experimental and control groups in the post application in terms of L value and the accompanying level of significance and in the interest of the experimental group. The calculated volume of impact appears clearly and a great impact of biometric training in comparison to normal training on the development of physical and motor training. The researchers have seen that the prepared program by using biometric training used by the experimental group has its own positive impact in the physical abilities and the development of the muscular power of the legs. It is the same result arrived at by Nour-aldeen & Hamza (2017) which has referred that the biometric training has its own positive impact and improves the explosive power of the legs for footballers in Algeria. There is also Hamdullah's study (2016) which has referred that the

biometric training has its own positive impact and improves the explosive power of the legs for footballers in the Arab American University. Shouqi and Rasheed's study (2016) has referred that the biometric training has its own positive impact and improve the explosive power of the legs for footballers in for the elite footballers.

The researchers have also seen that the exercises of biometric training greatly contribute to developing the power of the muscles of the legs by means of regulating the work of the muscle between contraction and relaxation of the working muscles which lead to help to perform the movement easily and regularly. The explosive power largely depends on the employment of the greatest number of the motor units in the working muscles. This is the responsibility of the central nervous system. We can see that the muscular power increases in the case of stimulating all or most the fibers of a muscle by increasing muscular stimulators. As a result, the number of the participating muscular fibers increases the contraction of the muscles.

We can also see that this program improves the element of speed and that this result also agrees with (Rodrigo et al, 2016) which refers that biometric training has its own positive impact on speed for player of football in Chile. This also applies to Mohammed's study (2014). It is seen by the researchers that the time of performance develops for the experimental sample. In fact, biometric trainings greatly rely on the high speed in the contraction of muscles, the central and non-central to get to the best process of correlation and the relation between the speedy action and reaction. Scientists of athletic training confirm that biometric training effect the function of the muscle rapidly and speed up the frequency the skill movements for the player, directly reflected on the speed and mechanism of the movement. It is also confirmed that the element of speed is regarded as one of the main requirements of performance in modern football because of its importance and role in association with the other elements of physical abilities. The same applies to the technical and skill requirements which depend on speed.

The work of the suggested training program shows the improvement of the element of endurance. This result is in agreement with Rodrigo's study (Rodrigo et al, 2016) which refers that biometric training has its own positive impact on the development of the element of endurance for footballers (for both sexes) in Chile. The researchers have seen that there is an established relation between muscular power and endurance, particularly when performing physical activities which require a sense of continuity in carrying out some strong muscular work such as football, wrestling and boxing. It is also seen that the suggest training program by using biometric training which used by the research sample for the experimental group has its positive effect on the motor abilities and develops the element of agility. This result is in agreement with Rodrigo's study (Rodrigo et al, 2016) which refers that biometric training has its own positive impact on the development of the element of agility for footballers (for both sexes) in Chile. There is also Kumar's study (2013) which refers that biometric training has its own positive impact on the development of the element of agility for footballers in the university. We can also see that this program has developed the element of flexibility. (Chu et al, 2006) refer that the importance of the biometric training programs in increasing both the muscular power and ability, improving agility, increasing speed, avoiding injuries and improving athletic achievement. All this contributes to the improvement of physical and motor abilities for footballers. This is related to the researchers to the fact that this development of the individuals of the experimental group has taken place as a result to the application of biometric trainings and exercises by the members of the experimental group. It is confirmed that building modern experimental program is based on scientific accurate foundations for the sake of selecting the appropriate exercises and tools. There should be a sense of harmony between these exercises and age groups of players and their level. An accurate process of planning and selecting the most suitable exercises enable the coach to develop the most important physical and motor abilities as well as the player's mastery of the basic skills of football. The use of some biometric exercises is important in building the potential energy in muscles which is used in increasing the generated power during the process of jumping. The aim of biometric training is to develop the effectiveness of both the muscular and nervous systems in an easy way to perform rapid and strong movement in opposite directions, together with decreasing the time of performance for players in the interest of modern football.

Conclusions

Throughout the present study and after the Presentation of its results and discussing them, the research comes up with the following points: Biometric training for (8) weeks/ (3) training units per a week has its own positive effect on developing physical and motor abilities for the research sample. There is a sense of preference of biometric training to normal training in all physical and motor abilities for the research sample.

References

- Abd, H. J. (2021). The Effect of Comparative Training on the Achievement and Trajectory among Young Weightlifters. *Indian Journal of Forensic Medicine & Toxicology*, 15(3)
- Abd, H. J. (2022). A Device For Balancing The Weight And Its Impact On The Achievement Of Young Lifters. *Revista iberoamericana de psicología del ejercicio y el deporte*, 17(5), 332-334
- Abd, H. J. (2022). Respiratory Return Exercises And Its Effect On Some Respiratory Indicators In The Preparation For Olympic Lift And Achievement For Advanced Lifters. *Revista iberoamericana de psicología del ejercicio y el deporte*, 17(5), 350-352
- Al-Khateeb, Mazin (2010). The Impact of Programs Based on Manual Resistance with Weight in Developing Muscular Power and Skill Level for Footballers/ Junior Players, The Jordanian University.
- Al-Mawla, Mowafaq Majeed (2010). Analysis of the Dutch View of Football: A Way of Thinking, not a Way of Playing. Dar Al-Kitab Al-Jami'i, Al-Ayan (UAE).
- Al-Mayyah, A. M. M. (2021). Acquired learning disability and its contribution to weakness of mastery of learning of precision of some tennis skills among students of College of Physical Education and Sport Sciences. *Revista iberoamericana de psicología del ejercicio y el deporte*, 16(5), 3
- Alwan, S. A. (2021). The effect of meditative thinking of play plans on the divided and selective attention of basketball players. *Revista iberoamericana de psicología del ejercicio y el deporte*, 16(6), 23-27
- Alwan, S. A. (2022). Creative thinking and its relationship to visual field and visual speed among goalkeepers of the Iraqi Handball Premier League. *SPORT TK-Revista EuroAmericana de Ciencias del Deporte*, 22-22
- Alwan, S. A. (2022). Role of the Learned Helplessness in Diminishing the Precision of Jump Shooting For Young Basketball Players. *Revista iberoamericana de psicología del ejercicio y el deporte*, 17(3), 91-93
- Chu, Donald. Faigenbaum, Avery. Falkel, Jeff. (2006): Progressive plyometric for kids. Healthy learning. USA.
- Hamdullah, Jawdat Satti (2016). The Impact of a Suggested Training Program by Using Biometric Training on Some Physical and Physiological Abilities for Footballers in the Arab American University. (Unpublished M.Sc. Thesis). College of Physical Education/ University of Al-Nejah Al-Watania. Palestine.
- Hassanain, Mohammed Subhi and Abdul-Muni'm Hamdi (1997). The Scientific Bases of Volleyball and Methods of Measurement. Cairo, Youths Center for Publication, p. 30.
- Hussein, A. A., & Salih, I. F. (2022). The impact of applying the KWL self-scheduling technique on first-year intermediate students' learning of basic volleyball skills. *Revista iberoamericana de psicología del ejercicio y el deporte*, 17(4), 202-204
- Hussein, A. A., Habeeb, H. A., & Ibrahim, R. S. (2022). The impact of mental training overlap on the development of some closed and open skills in five-a-side football for middle school students. *Revista iberoamericana de psicología del ejercicio y el deporte*, 17(4), 205-209
- Jassim, Muneer Mahmood (2014). The Impact of Some Training Mean on Developing the Skills of Passing and Accuracy of Scoring for Footballers. *Journal of College of Basic Education*, Vol, 20, No, 86. Iraq.
- Kumar, R. (2013): The Effect of 6-week plyometric training program agility of collegiate soccer players. *International journal of Behavioral social and movement sciences*, Vol.02, Jan 2013, Issue01.
- Mohammed, Khaleel Mohammed (2014). The Impact of Biometric Trainings in the Water and Terrestrial Mediums on Some Physical AND Skill Variables for Junior Footballers. (Unpublished M.Sc. Thesis), College of Physical Education. The Jordanian University. Jordan.
- Nour-aldeen, Ghanim and Hamza, Burah (2017). The Impact of Some Biometric Exercises on Developing the Explosive Power and the Legs Power Distinguished by Speed and Some Basic Skills in Football. *Al-Tahadi Journal*. No, 12. University of Al-Arabi Bin Mheedi Um Al-Bawaqi. Algeria.
- Rodrigo R, Marcelo V, Carlos H, Cristian M, Cristian z, Fábio Y, Carlos I., Alexis C, Alicia M, Alonso M & Mikel I, (2016), Effects of plyometric training on maximal intensity exercise and endurance in male and female soccer players, *Journal of Sports Sciences*, Volume 34, -Issue 8, Pages 687-693.
- Shouqi, Hassan and Rasheed Obaji (2016). The Impact of the Method of

Interval Training of High Stress in the Style of the Biometric on Improving the Power Distinguished by Speed for Elite Footballers. *Journal of Studies and Researches. Arabia Journal for Humanities and Social Sciences*. No. 24. University of Shalaf, Algeria, p. 129-141.

Tanahi, Najlaa (2000). *The Impact of Biometric Trainings on Developing the Power Distinguished by Speed and its Relation to the Performance of Kata for Junior Players of Karate*. (Unpublished M.Sc. Thesis), College of Physical Education for Women/ Zaqazeeq University, Egypt.