



The Impact of Special Training (Arms & Legs) on the Development of Explosive Potential and Accuracy in Consideration of Identifying the jump shot in basketball

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Abstract

The researcher's objective is the development of (legs & arms) and accuracy of jumping of players of basketball, as well as acknowledgment of development between both pretest and post-test in explosive and identification potential of basketball in the research sample. But the other hypothesis would be: There are differences statistically between pre- and post-evaluation of (legs and arms) while conducting test in accordance with samples. There is difference statistically between pre and post evaluation in consideration of jumping closed to the research. As a result the researcher uses experimental methods of implementing one group in purpose of pre and post test evaluation, the sample represents a group of students (female) of Koya Physical Education School and they're (7) Students of the studying year 2014 1015, afterwards, he has presented the used machines, tools and test; additionally, the researcher has used proper statistics instruments, he used 'average deviation, standard deviation, middle lines, Test (T) and the progressing average rate. The most important results are: There is a positive development in explosive potentials of both (legs and arms) from the research simple. There is positive development of jumping accuracy of the research sample. There are immaterial differences between pre and the post- power of legs and arms. There is a relative difference development between the two tests in the standard deviation of pre and post – tests of both legs.

Keywords: Special Training, Jump Shot, Basketball.

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Introduction

The study of human's movement in the fields of teaching and training will be gradually taken into consideration that related to different sports activity, which impact the movement performance, whether the factors are related to physiologically or physically factors or other factors in purpose of obtaining information, which lead to development of movement performance by the means of obtaining the best sports' results. The disciplined sports training leads to increase muscle capacity and will be appeared directly, whether it is static or dynamic, the impact of training comes from long term sustainability of muscles against facing tiredness and this functional capacity of muscles needs physiological alterations occurring through disciplined training. Basketball is considered to be the second match after soccer because it attracts players as well as crowds, though this kind of sports has a permanent quick rhythm between offensive and defensive during the match, basketball consists of multiple basic talents with which the general level will be raised, hereby the basic jumping talents. Jumping is considered as one of the main talents of basketball players, because it is the last phase for

attacking of any Team, and it is the only space between winning and losing, if a team possesses such talented individual in jumping, the liability and self – confidence will arise hugely and it is one of the main focal points of basketball players. The research's importance is maintenance of special potentials especially explosive capacity as well as keeping changes in Teaching Styles.

The problem of the research

Basketball game is Team – Work, highly talent and capacity are required in purpose of reaching the level, which has been required by the trainers so as to act actively during the match, and it is considered one of the necessary power elements of all activities and it is different especially by basketball, thus the basketball players need a specific element to perform the basic defensive and offensive talents for example (withdrawing offensively and defensively and ball capturing as well as throwing based upon jumping.

The researcher has collected experiences in education's field of basketball at college of physical education and saw the student's basic performance, he noted that mostly all student's have not been able to reach highly threw balls and reaching them to the correct position while jumping; the researcher has perceived that there is lack of capacity by students, for this reason, the trainer has analyzed the situation and fixed the case by offering special training in purpose of raising students'

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muscle capacity to a better performance, thus the researcher has begun with studying of arms – legs training for developing the explosive potential and jumping by basketball.

Research Objectives

Preparing a group of special arms – legs training in purpose of developing explosive potential and jumping (from the sample.)

Research Hypothesis

There are differences statistically between improvement average deviations of explosive potential capacities (arms and legs) and the talent of jumping of the research sample.

Research's fields

Time Factor: 21.10.2014 until 21.06.2015

Human Factor: College of physical Education Halls/Koya University. Human Factor of Students' (female) of the fourth year of College of Physical Education for the studying year 2014 – 2015.

Terminology Specifications

"Special Training" is a group of trainings that lead to development of physical capacity and talents. (Alawi 1992, p. 151). "Explosive Potential is a dynamical power that could be produced by muscle or group of muscles for only one time" (Ahmed, 1999, 115).

Theoretical Studies and the related Issues.

Theoretical Studies

The importance of special training (Talha, 1992)"knew that, it is training which has special specifications of a massive muscle – group and it's different configuration with all other well know anatomic components that is needed by talents in every time and in every phase of well know physical capacity, thus the parts of talents compose the last movement". These Trainings are to be implemented directly in purpose of obtaining the optimal movement and it could be considered as one of the nearest instrument for preparing students and building capacity in each type of sports that the student is practicing. And (Taha, 1994) adds, that the special training is preparation of a group of specified muscles parallel to the sport activity, it means, that it depends on general muscle improvement with consideration of technical talents. And Mr. (Abdil Al – Maqsud 1998) considers that these training consist of a group of practiced activities accordingly or alike or the method will be carried out differently and within direction or perceiving capacities. (Abd Al-Maqsud, p. 107)

Explosive Potential

with the kind of practiced sports, the more visual capacity improves, the more improving

performance level as it is mentioned by (Mohammed Hassan Alwai, 1992), it enables the player to perform his/her physical movements in the fittest way (Alawi 1991, 80). And Mr. (Sanjer 1990) has confirmed that dynamic talents can be obtained only by special anatomic capacity. It is the capacity of resistance hardly but in a tiny time (Farij 1990, 219). Thus the terminology has been disappeared concerning muscle capacities in accordance with oriental or occidental schools, so we have found that the occidental named as explosive potential as well as muscle capacity, but the oriental school named as distinguished power or the "quick power". (Abdulaziz and Narima 1996) confirm, the muscle capacities in one of the fundamental demands of performing sports and a high level of muscle capacity increases thus, a huge potential should be developed or high level of Speed. (Al – Namir and Al – Khatib 1996, p.35). Both Mr. (Mohammed Subhi Hussein 1997) and (SaddiqTolan 1980) agreed on the importance of the explosive potential of most sport activities which has a huge positive role in obtaining merit results by sports activists and especially when needs a situation in which the power will be practiced in a proper time quickly. (Hissnin 1997, p. 35), (Tolan, 1980, p. 19)

Goal – Scoring while Jumping by basketball

Goal – Scoring will be considered as the final stage of an offensive of the team, and the purpose is, putting the ball into the ring, when the player has learnt goal scoring, it lead to winning the match. Goal – Scoring is one of the most common thing occurred among the players within a match, thus Mr. (Mohammed Abd Al – Rahim 1995). Mr. (MadhatSalih 2004) mentions that Jumping need body harmony while gaol – schoring and staying in the atmosphere secondly and throwing the ball in a proper time, these method is hardly difficult for boys to learn it, because learning needs patient and training. (Al Saaid 2004, 61).

Research Methodology and Practice

Research Method

The researcher has used the experimental method, because it is a variable method used in the research, in addition to that it is one of the scientific research that will impact the variability relationships for the present time and the future. (Al – Bahi 1988 – 1999)

The Research Community and Samples

This research consists of Students of the fourth year, School Physical Education / Koya University of the studying year 2014 – 2015, the participants were 14 Students which represent 100% of Students rate of the fourth studying year. The sample included the research sample (7) students (female) and reached 50% of the entire research and the researcher used a group with pre and post-test experience.

Table I. Harmonization and Equality of Research Variability Sample harmonization in weight, height and age

| No. | Variability | S | I | Medium | Mode |
|-----|-------------|-------|------|--------|-------|
| 1 | Weight | 56.24 | 808 | 54 | 1.65 |
| 2 | Age | 22.71 | 1.25 | 22 | 0.02 |
| 3 | Height | 161 | 0.02 | 162 | 0.209 |

In the table I it will be explained that variability shapes concerning weight, age and height between (0.02) until (165) is not sampled.

Table II. Equalization in Explosive Potential and Goal – Scoring from the Research Sample

| No. | Variability | S | I | T value is calculated | Evidence |
|-----|------------------------------|-------|------|-----------------------|----------|
| 1. | Explosive Potential/legs | 7.14 | 11.5 | 4.17 | Material |
| 2. | Explosive Potential/legs | 26.71 | 7.97 | 3.51 | Material |
| 3. | Goal – Scoring while Jumping | 2.57 | 1.12 | 4.28 | Material |

In table II it will be explained that value (T) is calculated as explosive potential of (both arms and legs).

Explosive Potential Test of arms

The purpose behind it, is evaluation of explosive potential of the arms.

Tools: a medical ball weighs ca. (2 km.) chair, measurement tape, and equal surface. Performance Method: a student sits on a chair touches another student's shoulder, afterwards, the student hold the ball (2km) and while flexing the student throws the medical ball as far as she/he can.

Registration: the surface will be measured that the ball has reached by the polarization of the ball on the surface. (Zwied 2009, 121).

Explosive Potential of Arms

Used Instruments: a wall indicated on it from (1 – 2 cm) the signing should be marked with white chalk. The Way of Performance: at the beginning the student lifts (one of his/her arms) and helper stands with measuring his/her weight, afterwards the student (female) jumps and marks on the wall. Registration: the registrar measures the space between the first and the second marking (Mohamed 2009, p. 119)

Scientific Measures of Used tests in the Research.

Virtual Honesty

The researcher has presented his test to the specialists, then they responded as following:

The Tests have been measured by their properties evaluated (is a kind of honesty appears virtually so that is measured as evaluation properties) (Abdil Hafiz Wibahi, 2002, 127). The researcher has used the tests and re-testing on (4) students of group (B) and that is occurred on 15.12.2014, additionally the test has been repeated on 22.12.2014 though a method of correlation coefficient between the first and the second value that results was (0.78) (Abu Jalala 1999, p. 104).

Objectivity

It means giving the same marks by arbitrators

within stative qualification tests so the mark does not be devaluated by arbitrators, by the way the test gained a highly objective level (1999, p. 89).

Exploratory Test

The researcher has implemented an exploratory test on Monday, 15.01.2015 – a test has been carried out on a sample of students (female) of the third year, quantity (2) the purpose behind the exploratory test is as the following:

1. Time duration, which the test needs.
2. The suitability of test samples.
3. Quality of Test Responses.
4. Facing difficulties with the researcher during research execution.

Pre- Tests (Preliminary Tests)

The researcher has implemented (pre- test on 18.01.2015 in the Physical Education School of Koya University at 10:00 am.

The Main Experimentation of Method Implementation

The researcher has done the first test on Friday 15th 2015, the implementation needed 8 weeks, which consists of training units for developing explosive potential of arms and legs and developing of jumping that each unit needed (20 Mins.) at the implementation of all units occurred in the Physical Education School of Koya University.

Post – Test (confirmation/practical) Implementation

The researcher has implemented the Post-Test after the trainings has been adopted for (8) weeks and it was on 12.03.2015.

Statics' Instruments

The researcher has used the statistics package of the anthropology department, he used:

- The Arithmetic Mean.
- Standard Deviation.
- Medium
- mode
- Test of (T) of linked samples
- Simple Correlation Coefficient
- Rate of Improvements

Presentation, Analysis and Discussions

Results Presentation

After the implementation of the training program suggests has been effected and the post – tests (practical test) has been done, the researcher gained the results and suggests solving statistically and as following:

Table III. The Arithmetic Mean, Standard Deviation and Value (T) of ball throwing test between pre and post-test

| Test | Pretest | | Post-Test | | Value (T) calculated | Evidence |
|-----------------------|---------|-------|-----------|-------|-------------------------|------------|
| | S | I | S | I | | |
| Throwing medical ball | 2.76 | 0.448 | 3.26 | 0.561 | 1.84 | Immaterial |

In the table III it will be explained that the value (T) between the two tests of pre and post-test is only

(1.84) from the line rate, it is (0.355) and it is confirmed, that is only immaterial value.

Table IV.

The Arithmetic Mean, Standard Deviation and Value (T) concerning vertical jumping between the pretest and the post-test from the research's sample.

| Test | Pretest | | Post-test | | (T) calculated | Value | Evidence |
|---------------|---------|------|-----------|------|-------------------|-------|------------|
| | S | I | S | I | | | |
| Vertical Jump | 25.57 | 4.19 | 30.71 | 5.82 | 1.89 | | Immaterial |

In table IV it is confirmed that the (T) calculated (T) Value lies between the two pre – and

posttest, the value is only (1.89) from line rate (0.299) it is appeared as immaterial.

Table V. The Arithmetic Mean, Standard Deviation and Value (T) of the vertical Jumping between pre – and posttest from the research sample.

| Test | Pretest | | Post-test | | (T) calculated | Value | Evidence |
|-----------------------|---------|------|-----------|------|-------------------|-------|------------|
| | S | I | S | I | | | |
| Throwing Medical Ball | 10.42 | 1.71 | 15.28 | 3.19 | 3.5 | | Immaterial |

In table V the value of (T) is calculated between pre-and posttest is only (3.53) from the rate line of

(0.427) and it is appeared to be immaterial.

Table VI. Difference Presentation between Arithmetic Mean of Pretest and the post-test and rate of improvements of the tests.

| Test | Pretest | Post-test | Improvement rate |
|-------------------------|---------|-----------|------------------|
| Test of Aram's Capacity | 2.71 | 3.26 | 18.11% |
| Test of legs | 25.57 | 30.71 | 20.10% |
| Throwing while jumping | 10.42 | 15.38 | 47.60% |

In table VI it is explained that explosive potential of arms has been improved by 18.11% and the explosive potential of legs has reached by 20.10% and the jumping talent has reached 47.60%.

Result Discussions

From the above tables and after result analysis it is became clear that the value (T) of both tests, explosive potential capacity (arms and legs) as well as jumping whilst throwing there is only an immaterial difference and the researcher finds that the special training

implemented, had a positive impact on the explosive potential and it is in accordance with the results of both Mr.(SaadMuhsin 1996 and SalihRadhi) who confirmed that permanent training improves the explosive potential and followed by dynamic talent capacity in basketball. Permanent training improves the capacity of muscles, arms and legs, which lead to a quick performance and the scientific principal of training is jumping, throwing and throwing the medical ball is one of the muscle contractions and when it is occurred directly to the same muscles or a muscle group so it is obvious that is ended tension and followed by length muscle. (Muhsin 1996, p.150) , (Radhi 1999). This muscle contraction leads the player to a high level, when there has not been jet the preliminary length, and this improvement leads to basic increasing and accurate performance, it is jump – throwing ball and it is increasing muscle capacities of both legs and arms.

Results and Recommendations

Results

The practiced trainings in the methodology have a positive influence on developing explosive potential (legs and arms) and talent of jumping whilst throwing. Appearance of differences between the two tests, pre-and post tests concerning explosive potential (legs and arms) from the sample. Appearance of differences between pre-and post tests in the level of jump whilst throwing, there is a positive development in the rate of explosive potential (legs and arms) and jump whilst throwing from the research sample.

Recommendations

1. Using special trainings in purpose of developing explosive potential in other activities.
2. Using special trainings in purpose of developing level of basic talents by basketball.
3. Selecting special trainings in accordance with goal from muscle groups.
4. Developing physical capacities generally should be taken into consideration.

Resources

1. Abdularahim 1995. Mohmammed, Offensive in Basketball, AlmaarifMansha, Alexandria.
2. Abdulkhaliq 1992. Isam, Physical Training, Theory and Practice, seventh publication, Dar Al-Maarif, Alexandria.
3. Abdulla 2015 , Khalid Hussein, designing jumping accuracy from outside of the three curve in accordance with new measurements by Basketball, the European Magazine for Sport Technology Sciences in Sweden. No. 6
4. Abu Jalal 1999. SubhiHamdan, Modern Directions in Education Evaluation, 1st Print, Falah Bibliotheca for Distributing.
5. Ahmed 1999. Bistwiesi, Basic and Theory Sports Training, Dar Al-Fikir Al-Arabi, Al-Qahira.

6. Alawi 1992. Mohammed Muhsin Hassan, Science of Sports Training Sec. Print, Dar Al-Mahrifa, Qahira. (Al-Namir and Al-Khatib 1996), Abdulaziz Ahmed Abdulaziz and Nariman, Weight Training (designing power programs and training season plan), Kitab Center for publishing , Al-Qahira, (Hussnin 1997) HamadSubhi, Evaluation and Measurement in Sports in Physical Educations , Sec. Print, Second Part, Dar Al Fikir Al – Arabi, Al-Qahira).
7. Albahi, 1999. Mustafa Hussein, Scientific Procedures between Theory and Practice sec.Print, Alkitab for Publishing, Al-Qahira.
8. Farij 1990, AlinWadidh, Basketball, Guide for Teachers and Trainers, The Origin of Acknowledgment (Abdulhafiz and Bahi 2002) Ikhlash Mohammed and Mustafa Hussein “Scientific Methods and Special Analysis in Education, Phycology and Sports” Dar Al-Katib Publications, Al Qahira.
9. Husamaddin, 1993. Talha and others, quality training and its relationship to ackoledgment levels in gymnastic, scientific maganzine of physical education in the arab world, thired volume, December in Al-Qahira.
10. KhatibNariman 1990. NarimaMahmood, trace of deep training on muscle capability of legs and the capacity of players, scientific magazine, third volume, No. 3, College physical education in Al-Qahira, University of Hilwan.
11. Mohammed, 2009. Mohammed Ahmed, Impact of Dynamic Activity on Development Physical and Talent Alteration by Basketball Youth Players, Master Degree Thesis in Manshura, Zaqaqiq University.
12. Muhsin 1996. Saad, impanct of training style on explosive potential of both legs and legs in accuracy long term jump by basekball, Ph.Dr. Thesis, College of Physical Education.
13. Radhi, 1999. Salih, impact of teaching methods in developing explosive potential of upper muscles and its realtion to goal scoring and each ball after range, Ph.Dr. Thesis, College of physical education, Baghdad University.
14. Saaaid 2004. MadhadSalih, Education and Training Programs in Basketball, Dar Al-Qalam, Qahira.
15. Tolan 1980. IsamSaddiq Mohammed, Trace of Special Development quickly in purpose of improving Performance in Gymnastics, Dr.PH Thesis not published, Physical Education Singel Gender (males) Alexandria University.
16. Zwied, 2009. Abdulrahman Awad, the Impact of Bolometric Training on the development of muscle capacity and the three dimension jumping of basketball, Master Degree Thesis, not published, Zaqaqi University.