



Comparative Study of the Compound and Short Interval Training Method to Develop(Strength and Speed) Tolerance And Its Effect on Crush Serve and Court Defense Skills in Volleyball

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ABSTRACT

Realizing good results required following scientific studied training methods according to the productive work towards more knowledge of the muscular strength considered basic in practicing the sport games and to finding development means of muscular strength of the individual which is regarded the common denominator of performance for most of the sport games, and the research problem has become clear of non-using of diversity in scientific and training methods related with developing tolerance and its relation with other physical characteristics serving the skill performance, thus the researchers has opined to study the problem via comparative study using the compound training and the short interval to develop the (strength and speed) tolerance and its effect on the two skills of perpetration and defense the volley ball court, and the experimental training unit was used for its compatibility with the problem nature via using the two coefficient groups design being suitable to solve the research problem, and the sample included players of al-karkh volleyball sport club players, advanced category and the sample number was (12) players and the sample was divided into two groups, the first included (6) players trained on the compound training) as for the second group included(6) players trained on the short interval training and the and the two training units were applied for(12) weeks and the two researchers have come up with the following conclusions:-

- 1-The compound training (the weights , and the biometrics) has developed (strength and speed) tolerance also the crush serve and defending the court skills.
- 2-The interval training developed(the strength and speed) tolerance also the crush serve and defending the court skills
- 3-The compound training was more effective compared with the short interval training in developing (strength and speed) tolerance.

KEYWORDS

The first category Identification with research

1-2 The research introduction and its importance

Realizing good results required following scientific studied training methods according to the productive work towards more knowledge of the muscular strength considered basic in practicing the sport games and to finding development means of muscular strength of the individual which is regarded the common denominator of performance for most of the sport games, the training method develops the physical and skill levels, besides it is an exciting nature for practitioners which helps to improve motives for them.

The compound training is one of the methods of training aiming at developing the muscular ability and realizing the sport objectives, besides developing the athlete physical fitness, where the weight training with the biometrics are performed in the same training unit and this is called the compound training and through which the athletes could obtain the best training results.

The short interval training is considered one of interval training which is divided based on the(performance time) and targeting at develop the physical and skill characteristics, besides increasing the body resistance for the factors causing fatigue because of its positive result, thus the training units is measuring via the extent to which the completed and good methods are used besides the athlete's using in type of activity practiced through the physical, skill and functioning levels.

The volleyball game in constant development and advancement because of knowledge of various sciences and depending on the scientific research and revealing the precise details

in the training unit and because of the basic physical ability and the second rule to improve the kinetic skills which is one of then basic requirements of good performance in volley ball, thus it has become obligatory for the coach to direct the player to develop his physical abilities to realize the fundamental objective represented by reaching the excellent achievement, based on this the importance of the research has become clear via studying methods of the compound training and the short interval training to improve the (strength and speed) tolerance and their impact on the crush serve and defense of the volley ball court.

1-2 The research problem

Each sport activity and performance has physical abilities differ from other activities inconsistency with performance and laws related with the game. The two researchers have teaching experience of volleyball material, besides observing training of teams and their contests, found weakness in skill performance for the those practicing the game, especially the crush serve and defense of volleyball skills required tolerance strength and speed, besides accuracy, where the two researchers ascribed these of non-using diversity in scientific and training methods related with developing tolerance and its relation with other physical characteristics serving the skill performance, thus the two researchers have opined to study the problem via comparison study using the compound training and the short interval training to develop (the strength and speed) tolerance and their effect on preparation and defense skills of volleyball court.

3-1 The research objectives

1. Set up two training units depending the compound and the short interval trainings to develop(strength and speed) tolerance and their effect on crush serve and de-

- fense of the volleyball court skills.
- Identifying the effect of the compound and the short interval trainings to develop (strength and speed) tolerance and their effect on crush serve and defense of the volleyball court skills.

The research hypotheses

1-There are differences of statistical significance between the pre and post tests for the two research communities in (strength and speed) tolerance and their effect on crush serve and defense of the volleyball court skills.

2-There are differences of statistical significance between the post tests for the two research communities in (strength and speed) tolerance and their effect on crush serve and defense of the volleyball court skills.

The research scopes

- 1-5-1 the human scope/Al-karkh sport club advanced players of volleyball
- 1-5-2 time scope/ from 25/4/2015 till 11/07/2015
- 1-5-3 the special scope/ indoor hall of Al-Sinaa club
- The second category
- The research method and its field procedures

3-1 The research procedures

The research problem specifying type of the used training unit, and the used training units for its suitability for the problem nature through using the two groups coefficient design for its suitability to solve the research problem.

3-2 The research sample

The sample included players of Al-karkh volleyball sport club players, advanced category and the sample's number was (12) players and the sample was divided into two groups, the first included (6) players trained on the compound training) as for the second group included(6) players trained on the short interval training and to realize consistence among the research sample individuals, where the two researchers used torsion coefficient of the research variables in (tall, weight and age) as illustrated in table(1) and the equivalence was performed for the research variables, as illustrated in table(2)

Table(1) illustrating consistence of the research sample

variables	Mean	Standard deviation	Mediator	Torsion coefficient
Age	690.27	36.2	540.27	287.0
Tall	60.184	83.5	40.184	1540.0
Weight	31.83	13.3	00.83	392.0

Table (2) illustrating equivalence between the research sample

Variables	First experimental group		Second experimental group		Value of calculated	significance
	Mean	S.D	mean	S.D		
Test of tolerance for the legs	63.34	784.34	12.34	667.0	31.1	Non-significance
Test of strength tolerance	33.36	832.0	21.36	811.0	43.1	Non-significance
Test of crush serve skill	66.10	601.1	97.10	30601	20.1	Non-significance
Test of court defense skill	0.21	321.2	321.2	63.2	98.0	Non-significance

Value of tabular (T) (32.2) at error level (05.0)

3-3 the research tools

- the Arabic and foreign resources
- form of recording and discharge of data
- Devise for measuring weight
- Volleyball court
- Measuring tap
- Tests and standard
- tests used in the research

1-Test of speed tolerance.

- Test of strength tolerance for the legs muscles.
- Test of crush serve skill.
- Test of court defense skill.
- The research field procedures

3-6-1 The pre-tests:

The two researchers performed the pre-tests of the research sample on 25/4/2015, and the conditions related with the research were specified such as (place , time and method of execution the tests) to realize the same conditions or close to them as possible during execution the post-tests.

3-6-2 the experimental training unit

The two researchers executed the main research experiment on the two research communities from 30/4/2015 till 09/7/2015 and here the experimental tests were applied on then sample, where then first experimental group trained with method of the compound training. As for the second group trained with short interval training for (12) weeks of average(3) training units weekly and the load fluctuations were(3/1)

3-6-3 The post-test

The post-test for the was performed on the sample individuals and in the same way and for the research communities on 11/7/2015

The statistical means

The S pss was used

- the means
- the medium
- The standard deviation
- The torsion coefficient
- T- test for the analogical samples
- T-tests for the symmetric and non-symmetric samples

The third category

Display and discussing the results

Table (3)The table illustrated means, standard deviation and(t) two calculated values for the first and the second experimental groups in the post-tests

Variables	First experimental group		Second experimental group		Value of calculated	significance
	mean	S.D	mean	S.D		
Test of tolerance for the legs muscles	11.33	641.0	54.31	532.0	3.26	significance
Test of strength tolerance	62.43	213.1	351.1	41.5	41.5	significance
Test of crush serve skill	83.15	47.1	33.16	34.2	96.3	significance
Test of court defense skill	38.27	11.3	86.26	57.3	32.4	significance

Illustrated means, standard deviation and (t)calculated tabular value for the (the first and the second) experimental) groups in the post test, the results have showed in table (3) that there are significant differences in means for both groups illustrated the superiority of the first experimental group in the research variables and the two researchers ascribed this to efficiency of the compound training in developing the muscular strength

and tolerance for the players. The benefit of weight and biometric trainings have an effect on development of loading characteristic(strength and speed) and the mixing process between the two training have given significant differences in favor of the compound training in all variables, tolerance of (strength and speed) skills(the crush serve and defense of the court), where there is close relation among the compound training and the characteristics. That continue in physical systematic training(Hakkinen) ,the player acquired in training process and this inconsistency with it(resulted in development of tolerance characteristic. Means the ability to continue in relative severe muscular work for along period means the muscle ability for one or more muscles against fatigue factor via continuous multiple muscular contractions.

Fifth category

1. Conclusions and recommendations 5-1 Conclusions
2. The compound training(weights, biometric) has developed (strength and speed) tolerance and crush and court defense skills of the court.
3. The interval training has developed (strength and speed) tolerance and crush and defense of the court skills.
4. The compound training was more effective compared with short interval training to develop the research variables in pre and post-tests after applying the training units.

5-Recommendations

1. Emphasize on using the compound training in development the various physical variables for its effectiveness.
2. Perform studies and similar researches on another samples.
3. Paying attention for those working in the field of the training the game to setup the training units(weights and biometrics) and distributed them in consideration.