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The Effect of Using General Assistive and Semi-Competitive Exercises with Weights in the Explosive Power of Legs and Arms and the Level of the Technical Performance of the Snatch Lift

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Abstract

This study is considered as an evaluation study for the work of the trainers and their training programs and to reach a sound designing state to raise the skillfulness and physical levels of the players and to elevate the level of sport and widen its base in Iraqi Kurdistan region. Identifying the effect of using general assistive exercises in the explosive power of the arms and legs and the level of the technical performance of the snatch lift. Identifying the effect of using semi-competitive exercises in the explosive power of the arms and legs and the level of the technical performance of the snatch lift. Identifying the most effective two groups in the explosive power of the arms and legs and the level of the technical performance of the snatch lift. The experimental curriculum was used for being appropriate to the nature of the research. The research sample was intentionally selected from the third grade students from the physical education college, Koya university, Erbil and of the season (2014-2015). The research sample was selected from this community and it included (20) students who represent (55.55%) of the research community which included (36) students. They were intentionally selected as excellent weight lifters especially snatch lift through identifying their technical performance. Also students were selected to perform the observational experiments in addition to their percentages. The so-called randomly-selection equipollent groups design of the pre and post tests. Training with general assistive exercises has a positive effect in the explosive power and muscular ability of the legs and arms, the speed power of the arms and the technical performance level of the snatch lift. Training with semi-competitive exercises has positive effect in the explosive power and muscular ability of the legs and arms, the speed explosive power of the arms and the technical performance level of the snatch lift. In spite of the positive effect of training with general assistive and semi-competitive exercises, there is a relative distinction of training with general assistive exercises in the legs explosive power and the speed power of the arms. In spite of the positive effect of training with general assistive exercises and semi-competitive exercises, there is a relative distinction of training with semi-competitive exercises of the muscular ability of legs and arms. In spite of the positive effect of training with general assistive exercises and semi-competitive exercises, there is a relative distinction of training with semi-competitive exercises of the technical performance of the snatch lift.

Keywords: Assistive Semi-competitive Exercises, Explosive Power, Snatch Lift.

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1- Identifying the Research

1-2 Introduction and importance of the research

One of the first requirements of the weight lifting is to develop the physical properties of all types of the explosive power characterized with speed and developing power, kinetic speed, flexibility and fitness in order to integrate them for the weight lifters. That is because developing the base of the specialized fitness factors is considered a task for both performance and the athletes' health (Hoffman et al. 1998). The first attention is set towards the uses of power to develop the muscular capacity of the good performance, especially that the explosive power contributes in the basic skills essentially because performing its skills is characterized with explosiveness and high speed. The explosiveness training methods and instruments differ according to the type of the used training system, the required period of time, the training phase, the players levels, their capacities and abilities and the available potencies … etc. Each of these methods and instruments of training has its goals and purposes, they are to be invested to develop the player's ability to perform better. Some of these methods and instruments depend on intensity, size, repetition, variation, rest rate, practice and the required period for training, all of them aim at developing the skillful fitness and according to the requirements of the sport but it differs from one sport to another. The scientific references referred to that using general

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assistive exercises especially with weights started to be noted in the field of the sport training and it contributes widely in developing the factors of the explosive power and power of kinetic speed and transitive power etc. Weight lifting requires this type of trainings in developing the explosive power of the arms and legs and that plays a great role in execution.

Through the scientific attempt of the two researchers in searching for modern training alternatives by using general assistive and semi-competitive trainings and in the light of paths of kinetic performance of the basic skills and using them in the methods of developing the joined muscular groups towards developing the explosive power of the working muscles in performing the skill of the snatch lift by weight lifters. The second importance in which this study contributes is attracting the trainers to use modernized exercises depended by the training programs in developing the physical characteristics special for weight lifting as to be alternatives for the other traditional exercises. Therefore, this study is considered as an evaluation study for the work of the trainers and their training programs and to reach a sound designing state to raise the skillfulness and physical levels of the players and to elevate the level of sport and widen its base in Iraqi Kurdistan region.

1-3 Goals of the Research

1-3-1 Identifying the effect of using general assistive exercises in the explosive power of the arms and legs and the level of the technical performance of the snatch lift.

1-3-2 Identifying the effect of using semi-competitive exercises in the explosive power of the arms and legs and the level of the technical performance of the snatch lift.

1-3-3 Identifying the most effective two groups in the explosive power of the arms and legs and the level of the technical performance of the snatch lift.

1-5 Fields of the Research

1-5-1 Spatial field: Weight lifting hall in the physical education school in Koya University.

1-5-2 Human field: a sample from third grade students of the physical education school in Koya University.

1-5-3 Time field: from Nov 20 2014 to March 5 2015.

3-1 Research curriculum

The experimental curriculum was used for being appropriate to the nature of the research.

3-2 Community and the sample of the research

The research sample was intentionally selected from the third grade students from the physical education college, Koya university, Erbil and of the season (2014-2015). The research sample was selected from this community and it included (20) students who represent (55.55%) of the research community which included (36) students. They were intentionally selected as excellent weight lifters especially snatch lift through identifying their technical performance. Also, (4) students were selected to perform the observational experiments in addition to their percentages.

Table I. Information related to the numbers, samples, observational experiments samples and percentages of the research community

؟؟؟؟؟	Number	percentage
Research community	36	100%
Research sample	20	55.55%
observational experiments sample	4	11.11%

3-3 Comparison and assort of the two groups of the research:

3-3-1 Assort of the research groups:

The assort among the sample of the research was conducted in the variables of (age, length, mass) through bend coefficient. Table II shows the mathematical medium, standard deviation and the bend coefficient of the above mentioned variables .

Table II. The mathematical medium, standard deviations and bend coefficients of the variables of age, length and weight

Variables	Meas. Unit	First experimental group			Second experimental group		
				Bend coef.			Bend coeff.
Age	Year	23.65	1.97	-0.531	22.40	1.50	0.117
Length	Cm	174.65	3.016	0.142	158.90	5.28	0.164
Weight	Kg	70.15	3.264	-0.349	66.60	9.47	0.650

Table II shows that the values of the bend coefficients of the variables depended in the assort of the first experimental group and the values are (-0.531) (0.142) (-0.349) respectively. For the second experimental group, the bend coefficients are (0.117) (0.164) (0.650) respectively. That shows the assort of the two groups in the mentioned variables. (Wadee and Hassan, 1999) refer to that when the bend coefficient gets closer to zero, it means the there is assort of the sample (Wadee Yaseen, 1999).

3-3-2 Parity between the two groups of the research

The parity between the two groups was conducted through the statistical differences by using (T) calculated values and the level of probability. Table III shows the results of these measurements.

Table III. Mathematical medium, standard deviations, (T) calculated values and probability level between the two research groups in the variables of age, length and weight

Variables	Meas. Unit	First experimental group		Second experimental group		(T) calc. value	Probability level
Age	Year	23.65	1.97	22.40	1.50	0.216	0.728
Length	Cm	174.65	3.016	158.90	5.28	0.082	0.553
Weight	Kg	70.15	3.264	66.60	9.47	0.111	0.814

Table III shows that (T) calculated values are (0.216), (0.082), (0.111) respectively on the level of probability of (0.728), (0.553), (0.814) respectively and they are less than (0.05). that means there are no significant differences between the two groups which assures there are parity in all the variables depended in parity.

3-4 Tests and measurements used in the research:

3-4-1 Sargent vertical jump test
3-4-2 Steady wide jump test
3-4-3 Pushing (3 kg) medical ball with hands test
3-4-4 10 seconds push ups test

3-5 Data collection methods (research tools used):

3-5-1 Content analysis:

The two researchers used content analysis to obtain accurate information about the research through analyzing the scientific references and studies about the research subject.

3-5-2 Surveys:

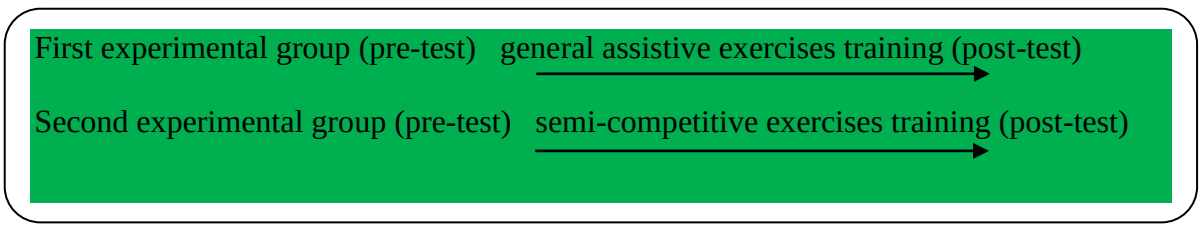
Many surveys were designed and distributed on many specialists of different fields and as follows:

1. A survey that includes explosive power test of arms and legs (appendix 1). It was distributed on specialists in the fields of sport training science, sport training physiology, measurement, evaluation and weight lifting (appendix 2).
2. A survey that identifies the best general assistive and semi-competitive exercises (appendix 3). It was distributed on specialists in the fields of sport training science, sport training physiology and weight lifting (appendix 5).
3. A survey that includes the two training curriculums to certify their validity (appendix 4). It was distributed on specialists in the fields of sport training science, sport training physiology and weight lifting (appendix 5).

3-6 The used experimental design

The so-called randomly-selection equipollent groups design of the pre and post tests (Mohammed Hassan, 1999) was used as shown in figure (1).

Figure I. Shows the experimental design used in the research



3-8 Field procedures steps:

3-8-1 Constructing the two training curriculum:

Two proposed training curriculum for the research groups was designed (appendix 4). The first one included training with general assistive exercises and the second included semi-competitive exercises training. They were presented to a group of specialists in the fields of the sport training,sport training physiology and weight lifting (appendix 5) to obtain their opinions about the validity of the two curriculums. After presenting the mentioned survey, the specialists notes were recorded and the two training curriculums were completed as

shown in (appendix 4).

3-8-2 Observational experiments:

The researcher conducted two observational experiments with assistance from work team mentioned before and each experiment had different goals from the other experiment and as follows:

3-8-2-1 The first observational experiment of physical tests, technical performance and video recording:

This experiment was conducted on Wednesday (7 Jan 2015) with (4) students of the research community with assistance from the work team. Physical tests were conducted and the goals of the experiment were as follows:

1. Identifying the validity of the used tools and equipments.
2. Identifying the tests and measurements appropriateness to the level of the research sample.
3. Identifying the efficiency of the assisting work team and the extent of their work perfection.
4. Identifying all the difficulties and obstacles that may emerge during the tests and measurements.
5. Identifying the time period to perform each test and measurement.

3-8-2-2 The second observational experiment on the depended exercises in the research for the two curriculums:

This experiment was conducted on Thursday (8 Jan 2015) on (4) students from the research community with assistance from the work team. Selected exercises from the two training curriculums were conducted and the goals of the experiment were as follows:

1. Identifying the time span required for each exercise.
2. Identifying the duties of each individual of the assisting work team.
3. Identifying the intervals between repetitions and groups through pulse indicator.

3-8-3 Pre tests and measurements

The pre tests and measurements were conducted from (14 Jan 2014) to (15 Jan 2015) and as follows:

1. On Wednesday (14 Jan 2014), the physical tests were conducted.
2. On Thursday (15 Jan 2015), the technical performance and video recording were conducted.

3-8-3-1 Video Recording

Two video cameras were used for video recording (Panasonic M900) South Korea made and (SONY Digital Full HD 16) Japan made. The first camera was installed on the left side of the platform (towards the student) so that the camera's lens is vertical quixotic in the center of the platform. The camera is (3.73 m) far and the lens height is (98 cm). The second camera was installed on the right side of the platform and the lens was vertical on the same spot and is (4.07 m) far with lens height (1.09 m). The researcher used pattern standard of (1 m) long.

3-8-3-2 Measuring the technical level of the snatch lift performance:

The twenty students did general and special warm up for 15 minutes. After that they gradually raised the weight until they reached suitable performance level. The goal at this point is that the player reaches a suitable level to perform the snatch lift. Later, the students started performing their snatch lifts attempts legally on the platform. Each player conducted three attempts and the best attempt is recorded. At the same time, the three attempts were recorded by video. Two video cameras were used from two different angles in order to obtain the best performance angle. After that, the three attempts were shown to three experts in the field of the weight lifting in order to evaluate the students performance and give points to them from (1-10).

3-8-4 The two training curriculum application:

The two proposed training curriculum were applied on the two research groups on (19 Jan 2015) until (2 March 2015). The following points were taken into consideration:

1. The two training curriculums included (2) medium course s and each course included (4) smaller course s with weight formation of (3 : 1) in each medium course.
2. Each smaller course included (2) training units per day, i.e. (16) training units were executed during each curriculum for the two groups of the research.
3. The daily training units of the smaller course s for the research groups were executed on Mondays and Thursdays.
4. All the training units started with general warm up then with special warm up for all the body working muscles. The training units were ended with relaxing exercises for all the muscles.
5. The size among the two groups in the training curriculums was unified. Using the intensity control style that represents (speed) which was (75% - 90%) for the two groups in training with general assistive exercises and training with semi-competitive exercises and as follows:
    - The first medium course :
    - The first small course (75%), the second small course (80%), the third small course (85%) and the fourth small course (75%).
    - The second medium course :
    - The first small course (80%), the second small course (85%), the third small course (90%) and the fourth small course (90%).

The two researchers consider these percentages appropriate for the level of the research sample after conducting the second observational experiment special for the exercises used in the research.

3-8-5 The post tests and measurements:

After the execution of the two training curriculums of the two research groups, the two researchers conducted the post tests and measurements with the same approach and sequence of the pre tests and measurements and as follows:

- On Wednesday (4 March 2015), the physical tests were conducted.
- On Thursday (5 March 2015), the tests of the technical performance and video recording were conducted.

4-1-1 Show and analysis of the results special for the physical variables and the level of the technical performance with discussion:

After the execution of the field procedures of the research, the appropriate statistical tools were used to check the goals of the research and test its hypothesis. In order to check the first goal, the significant differences were derived from some physical variables and the level of the technical performance between the pre and post test of the first experimental group in which general assistive exercises were used. Table IV shows the results of these differences.

Table IV. Shows the mathematical mediums, standard deviations of the explosive power of the legs and arms and the level of the technical performance of the snatch lift in the pre and post tests and (T) calculated values, the significance of differences of the first experimental group that used general assistive exercises

Variables	Meas. unit	Statistical references						
		Pre test		Post test		(T) calc. value	Prob. Level	Significance
Legs explosive power	Cm	49.90	7.23	65.00	6.63	15.36	0.002	Significant
Legs muscular ability	m/cm	220.70	23.32	246.01	20.54	5.49	0.001	Significant
Arms muscular power	m/cm	4.35	0.49	4.91	0.42	8.13	0.003	Significant
Speed arms power	No.	14.40	1.89	19.30	2.21	12.04	0.001	Significant
Technical performance level	Degree	5.52	1.05	5.89	0.94	6.15	0.002	Significant

- Significant on probability level of ≤ (0.05)

Table IV shows the following: There are significant differences in (legs explosive power and muscular ability and arms muscular power and speed power and the technical performance level of the snatch lift) between the pre and post tests for the benefit of the post test. (T) calculated values were (15.36, 5.49, 8.13, 12.04 and 6.15) respectively on probability level (0.002, 0.001, 0.003, 0.001 and 0.002) respectively and these values were < (0.05). To check the second goal and test the second hypothesis, the differences significance was extracted in some physical variables and the technical performance level of the snatch lift between the pre and post tests for the second experimental group that used semi-competitive exercises. Table V shows the results of these differences.

Table V. Shows the mathematical mediums, standard deviations of the explosive power of the legs and arms and the level of the technical performance of the snatch lift in the pre and post tests and (T) calculated values, the significance of differences of the second experimental group that used semi-competitive exercises

Variables	Meas. unit	Statistical references						
		Pre test		Post test		(T) calc. value	Prob. Level	Significance
Legs explosive power	Cm	48.50	6.13	61.60	6.44	7.81	0.001	Significant
Legs muscular ability	m/cm	209.80	18.71	246.60	27.2	7.55	0.001	Significant
Arms muscular power	m/cm	4.67	0.78	5.45	0.57	6.15	0.002	Significant
Speed arms power	No.	14.30	1.49	18.30	1.88	10.94	0.001	Significant
Technical performance level	Degree	5.29	0.63	7.03	0.61	17.98	0.003	Significant

- Significant on probability level of ≤ (0.05)

Table V shows the following: There are significant differences in (legs explosive power and muscular ability and arms muscular power and speed power and the technical performance level of the snatch lift) between the pre and post tests for the benefit of the post test. (T) calculated values were (7.81, 7.55, 6.15, 10.94, and 17.98) respectively on probability level (0.001, 0.001, 0.002, 0.001 and 0.003) respectively and these values were < (0.05).

In the light of the results obtained in tables (4-5) that showed significant differences between the averages of the pre and post tests in all the physical properties and the level of the technical performance of the snatch lift included in the research for the two experimental groups that used general assistive and semi-competitive exercises, we realize that the first and the second hypothesis have been achieved. The researchers proposed that there is is a positive effect of the research curriculums in the physical and the level of the technical performance of the snatch lift variables. The researchers can due this positive evolution to the active positive effect of the two training curriculums that were based on scientific planning that proved its efficiency. That led to developing the physical abilities and the technical performance level of the research sample in the two training curriculums that used (general assistive and semi-competitive exercises). These exercises are of high importance in the performance of the research sample. Through using the training specialty that is characterized with moderate intensity speeds and also appropriate since the beginning of the first training unit in the first small course until the end of the training curriculum. It is also characterized with a suitable size for the sample through using progressive increasing weight exercises for the two experimental groups of the research. This training has the basic property which is the appropriate intervals that played an important role, in addition to intensity and size that are mentioned in developing the general physical fitness and then improving the technical performance of the snatch lift which played an important role in developing these physical characteristics. Each physical characteristic in any activity requires special requirements that should be noted when shortening the training curriculums the thing that is paid attention in these curriculums although the used exercises are different. The training intensity in the research curriculums was shortened. The researchers consider them sound and appropriate because the curriculums are based on all the required training bases and principles to construct the training curriculums. In addition, the curriculums were presented to specialist in the fields of sport training science, sport training physiology and weight lifting and their opinions were taken into consideration. This shortening in the curriculums led to producing positive physical and functional changes after relying on all the points that have been noticed while producing the two training curriculums. These changes included the number of weeks and how to divide them according to medium course s and the variance of the weight movement in each medium course and the number of the daily training units in each small course and selecting the training component which will be depended in the training weight control style.

The researchers consider that the correct formation of the training intensity is the base of progress of the athletes whether physically, functionally and skillfully. The researchers also consider that one of the main effective factors to develop the physical characteristics and the technical performance level in the current research is due to positive physiological adaptation in the bodies of the research sample after they used general assistive and semi-competitive exercises regularly for eight weeks using a sound scientific planning for all field needs related to the training process. That assures what (Abu Al-Ola) referred to in this issue "in order to obtain real physiological adaptation, the athletes should be trained regularly for (8-12) weeks" (Abu Al-Ola, 1994). Using different exercises played an important role in fixing the variance principle in addition to the gradation in increasing the training intensity in the training curriculums that are carried out when transition in the training process to weekly training course s and also transition in medium course s where it is important to increase the training intensity scientifically to achieve the goal of the training curriculums which is developing the level of the research sample. Therefore, there was an increase in training intensity in the training courses in all the training curriculums. There was an adaptation in the training intensity increase in the small courses and continuity of the training process along the period of executing the training curriculums.

4-1-2 presentation and analysis of the differences results between the research two groups in the post test of the physical characteristics and achievement with discussion:

In order to check the third goal and test the third hypothesis, the difference significance was extracted of some physical variables and the technical performance level between the post tests of the two groups of the research. Table VI shows the results of these differences.

Table VI. The mathematical mediums, standard deviations of the explosive power of the legs and arms and the level of the technical performance of the snatch lift and (T) calculated values and the level of probability in the post measurement between the two groups of the research

Variables	1st group exercises of general assistance		2nd group exercises of semi-competition		(T) calculated value	Prob. Level	significance
Legs explosive power	65.00	6.63	61.60	6.44	1.162	0.260	Not significant
Legs muscular ability	246.10	20.54	246.60	27.26	0.046	0.964	=
Arms muscular power	4.91	0.42	4.45	0.57	2.402	0.281	=
Speed arms power	19.30	2.21	18.30	1.88	1.087	0.683	=
Technical performance level	5.89	0.94	7.03	0.61	3.183	0.116	=

- Significant on probability level of ≤ (0.05)

Table VI shows the following: There are no significant differences in (legs explosive power and muscular ability and arms muscular power and speed power and the technical performance level of the snatch lift) between the two groups in the post test. (T) calculated values were (1.162, 0.046, 2.402, 1.087 and 3.183) respectively on probability level (0.260, 0.964, 0.281, 0.683 and 0.116) respectively and these values were > (0.05). Change Ratios between the pre and post measurements of the two groups of the research:

Although there are no significant differences between the two groups in the post measurement, and in order to check the level of development of the two groups and to identify the best group, the change ratio law was used as shown in table VII.

Table VII. The differences and the change ratios between the pre and post tests of the arms and legs explosive power and the technical performance level of the snatch lift of the research groups

Variables	1st group general assistive exercises		2nd group semi-competitive exercises	
	Differences between pre & post	Change rate	Differences between pre & post	Change rate
Legs explosive power	15.10	30.26%	12.10	24.94%
Legs muscular ability	25.31	11.46%	36.60	17.54%
Arms muscular power	0.56	12.87%	0.78	16.70%
Speed arms power	4.90	34.02%	4.00	27.97%
Technical performance level	0.37	6.70%	1.74	32.89%

In the light of the obtained results in table VI, the differences in the explosive power and technical performance between the two groups in the post test are not significant. This realizes the third hypothesis because the researchers proposed that there are no positive differences between the experimental groups in the post tests of the explosive power of the legs and arms and the technical performance level of the snatch lift. This result assures that there is proximity in the progress level for the research groups in the tests of the legs and arms explosive power and the technical performance level. This presents an obvious evidence that using the repetitive training whether with general assistive or semi-competitive exercises has a positive effect and approximate in progress.

The researchers due these results to using the repetitive training method that is characterized with appropriate intensity speeds of (75-90%) from the beginning of the first training unit in the first small course until the end of the training course. This method is basically characterized with full rest intervals that played an important role. In addition to size and intensity that were mentioned in developing the physical fitness generally and the explosive power especially and then improving the technical performance of the snatch lift. (Abd Ali and Sabah Abdy) mention that obtaining the explosive power accompanied with speed in weight training in its limits realizes the best achievement, therefore, the weight lifting trainers are keen of producing the biggest amount of power in shortest time (explosive power) through weight because the athlete pays the maximum power in weight training to free the weights from gravity factor and to raise their level to perform the best achievement (Abd Ali Nusaif, 1998).

The researchers due this development to that the selected weight training has a positive effect in improving the muscular power and the technical performance level of the snatch lift and also to the success of the proposed training curriculums which improve the performance level. Training the legs and

arms muscles using weight training leads to greater power levels than the rest of the muscles of the body.

If we take a look at table VII, we realize that the differences and change rate of the legs explosive power and the arms speed power of the first group that used general assistive exercises are slightly more than the differences and change rate of the second group that used semi-competitive exercises. With this result, we can say that the trainers of weight lifting can use general assistive exercises in training the weight lifters, especially in the snatch lift and not to only use semi-competitive exercises or other methods because of the importance of this type of training in developing the legs explosive power and the arms speed power in the snatch lift. The researchers consider that the general assistive exercises used with the first group stimulated the necessary muscles fibers or stimulating the necessary number of fibers which led to increasing power greatly. That is because when the muscles are stimulated, they can be totally or partially be stimulated. That depends on the intensity of that stimulant. In addition, the used exercises were of good quality, directed and progressive to the working muscles which led to developing the explosive power of the legs muscles.

Although there are no significant differences between the groups in the legs muscular ability and the arms muscular ability and the technical performance level of the snatch lift. Table VII is proved by extracting the differences in these variables and the change rate between the pre and post measurements of the two groups. The second group that used semi-competitive exercises is relatively better than the group that used general assistive exercises. This gives a significance that the semi-competitive exercises carried out by the second group led to positive development in these physical variables and in the achieved progress in the technical performance level of the snatch lift in addition to using general assistive exercises carried out by the first experimental group. The researchers due the reasons of this development to the efficiency of the training curriculum of the group that used semi-competitive exercises which have clear effect in developing the legs and arms muscular ability and the technical performance of the snatch lift and also to the selected exercises included in the training curriculum. The used exercises are effective in developing the legs and arms muscular ability. Also, the semi-competitive exercises showed good results in the technical performance of the snatch lift which assures the improvement in the technical performance of this lift. Using semi-competitive exercises is a condition of the repetitive training with weights which led to better improvement in the arms and legs muscular ability of the second group and then led to greater improvement in the technical performance of the snatch lift the thing that assures the importance of the semi-competitive exercises to achieve better technical performance.

The training curriculum executed by the second group using weights led to improving the mentioned physical characteristics through using semi-competitive exercises which contributed in developing these characteristics and this is positively reflected in developing the technical performance level of the snatch lift through using intensities, repetitions and appropriate rest intervals which led to developing the test results of the technical performance. It is known that the technical performance is effected with the components of the kinetic fitness and that it requires nervous and muscular harmony in the legs and arms muscles. The researchers interpret this development of performance to the efficiency of the training curriculum of the semi-competitive weight training which led to developing the explosive power of the legs and arms and speed power. The development of the technical performance is due to the development of these characteristics as a result of using semi-competitive exercises.

5-1 Conclusions:

5-1-1 Training with general assistive exercises has a positive effect in the explosive power and muscular ability of the legs and arms, the speed power of the arms and the technical performance level of the snatch lift.

5-1-2 Training with semi-competitive exercises has positive effect in the explosive power and muscular ability of the legs and arms, the speed explosive power of the arms and the technical performance level of the snatch lift.

5-1-3 In spite of the positive effect of training with general assistive and semi-competitive exercises, there is a relative distinction of training with general assistive exercises in the legs explosive power and the speed power of the arms.

5-1-4 In spite of the positive effect of training with general assistive exercises and semi-competitive exercises, there is a relative distinction of training with semi-competitive exercises of the muscular ability of legs and arms.

5-1-5 In spite of the positive effect of training with general assistive exercises and semi-competitive exercises, there is a relative distinction of training with semi-competitive exercises of the technical performance of the snatch lift.

5-2 Recommendations and Suggestions:

5-2-1 Recommendations:

After realizing the scientific conclusions of the research subject, it is important to set a number of recommendations to certify the principle of benefiting of this study. Therefore, the researchers make the following recommendations:

5-2-1-1 The possibility to train with general assistive exercises and not to only train with semi-competitive exercises when training weight lifters especially the snatch lift.

5-2-1-2 Relying on general assistive and semi-competitive exercises that are used in constructing the training curriculums for all the lifters of all levels especially for the weight lifters.

5-2-1-3 The importance of relying on general assistive and semi-competitive exercises to develop the explosive power of legs and arms and the technical performance level of the snatch lift to train the weight lifters in general and especially on the snatch lift.

5-2-1-4 Urging the trainers to rely on all the training rules and bases required to design the training curriculums and training intensity formation (intensity, size and rest) and to summarize them appropriately for the weight lifters.

5-2-1-5 Urging the trainers to rely on the basic sport training principles to construct the training curriculums for their positive effect in improving the physical, functional and technical sides.

5-2-1-6 Conducting similar researches on other activities.

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