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## THE IMPACT OF A PROPOSED PROGRAM USING (RESISTANCE, FOCUS ATTENTION AND SPEED OF RESPONSE) ON CERTAIN JUMPS IN BALLET

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### Abstract

*Aim.* This research aimed to identify the impact of a proposed program using (resistance, focus attention and speed of response) on certain jumps (Pas de chat, Changement and Sissonne) in ballet.

*Methods.* Twenty two female students ( $19.55 \pm 0.79$  years old;  $164.98 \pm 4.02$  cm height; and  $59 \pm 5.31$  kg weight) were randomly allocated to receive either a 8-week intervention of training program ( $n = 11$ ) or a control group receiving 8-week of normal training only ( $n = 11$ ). Subjects were required to read and complete a health questionnaire that collected detailed that confirmed that there was no history of injuries, diabetes or recent surgery.

*Results.* The proposed program which using elastic cords exercise leads to the improved muscle power of legs and arms, attention, focus and improved level of jumps performance (Pas de chat, Changement, Sissonne) in the ballet.

*Conclusions.* Attention prolongation drills and flexibility before and after the performance of resistance exercises because of its great importance Access to the positive results in the development of muscle power of the legs, arms and level of jumps performance (Pas de chat, Changement, Sissonne) in ballet.

*Key words:* Resistance Training, Attention Focus, Ballet jumps.

### Introduction

Ballet is a type of dance performance that originated in the Italian Renaissance courts of the 15th century and later developed into a concert dance form in France and Russia. It has since become a widespread, highly technical form of dance with its own vocabulary based on French terminology. It has been globally influential and has defined the foundational techniques used in many other dance genres. Ballet may also refer to a ballet dance work, which consists of the choreography and music for a ballet production.

It is a universal language between the human and active physically integrated expresses the views of the people and their ideas and beliefs, needs and the real value of ballet lies in the opportunities available to those who engage in this art is extending force of the moral and mental and physical side psychologically and health, aesthetic and social development. (Iglal, Nadia, 1988)

Based on the multi-skilled in sentences ballet it would require of students proficient performance of jumps, so that they can supply well and this requires a long period of training and ability high to work to master these jumps. This requires increased ability to focus attention, and according to (Annan, 1995) that multi attention despite its importance in the sport, but he has not received the research and study to the extent that reflects its importance in individual sports.

The attention is not a psychological stand-

alone it stems from the perception must on human knowledge of things and quickly understood and inferred. (Yahya, 1990)

This confirms (Mohammed, 1999) that the attention of the basic requirements for good performance in the color of sports activity, and access to optimum performance, therefore is directed students to focus attention and vigilance and a loss of attention one of the key factors in the poor performance which affects directly not to win and move closer of defeat.

(Osama, 1999) noted that the focus of attention one of the important mental skills for athletes, attention disorders and lack of focus adversely affect the performance.

Attention means focusing on a set of facts and the exclusion of the other collects effectiveness of mental particular thing leads to the occurrence of responses, cognitively load to make the phenomenon full clarity or thinking about that thing emotionally (Abdel Halim, et al., 1990)

In the sports field, there are two types of motor response, as determined by the use of one of them depending on the type of exciting whether known or unknown, and within that is divided into:

Simple response: that occurs when the student knows the type of exciting advance, and is preparing to respond as certain in enemy competitions or swimming, gymnastics, which is about the process of sending a sexy cop unknown and the response so exciting.

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Complex response: In this type does not know the type of student exciting is going to happen in advance, as well as the type of motor response, as characterized by the existence of many of response stimuli in the performance space as well as the multiplicity of movements to respond as is the case in ball games and some of the individual games. (Adel, 1999)

The link between attention and response kinetic one of the basic requirements in performance, especially that any performance of the motor and the disposal of motor coupled with a concentration of attention which produces a good reaction and response kinetics are correct, it is mean understand the issues motor which helps in reduce the time required to realize motor, bringing the sport to the formation of a rapid response, which is an impressive act of the moment you enter the incentive to the brain and until the start of the response.

The development focus attention and response kinetic of the most important foundations that underpin the success of the reaction kinetic in ballet, as well as the development of other requirements, so we see that students need them to be able to configure the response is correct and the right time, and the fact that the attention and response did not take a great deal of research and study in the worn and because of their significant impact on the performance, she saw the researcher conducting this study was to determine the importance of these two variables in some of jumps. (Kevin, 1994)

The researcher observed low scores to the presence of the shortcomings in the jumps performance and the inability of students to the technical performance in good and poor focus attention and motor response to the students in (Pas de chat, Changement and Sissonne jumps) which need focus the attention and high- speed dynamic response.

Therefore, this research aimed to identify the impact of a proposed program using (resistance, focus attention and speed of response) on certain jumps (Pas de chat, Changement and Sissonne) in ballet.

Terms:

Ballet.

Silent art that moves in time and space based on music and unite the soul and the body to express certain feelings connected to a certain idea.

Attention focus:

Intended to focus attention drawn stenosis or install certain dramatically and continued attention on this interesting choice for a period of time

Pas de chat

"The step of the cat". The dancer jumps sideways, and while in mid-air, bends both legs up (two retirés) bringing the feet up as high as possible, with knees apart.

Changement

Literally "changing". A jump in which the feet change positions in the air. For example, beginning in fifth position with the right foot front, plié and jump, switching the right to the back, landing with the left foot front in fifth position. In the Vaganova vocabulary, petit changement de pieds indicates a changement where the feet barely leave the floor.

Sissonne

A jump done from two feet to one foot. Named after the originator of the step. In a sissonne over the back foot closes in front and in a sissonne under the front foot closes behind. Exceptions to the traditional sissonne include sissonnefermee, sissonnetombe, and sissonne fondue, which all finish on two feet.

### Methods

Experimental approach. Two groups (control and experimental) performed a pre- and post-training designed intervention in which the (power: vertical jump test (VJ), standing long jump test (SLJ), seated medicine ball throw (SMBT), concentration net test (CN), jumps level tests (JL)) was recorded. The experimental group completed the training program (8 weeks, 3 times a week, to see whether this type of training modality would have a positive, negative, or no effect on variables. Validity and reliability were assessed using a coefficient of variation on pretest measures. A good level of validity reliability was observed.

### Participants

Twenty two female students ( $19.55 \pm 0.79$  years old;  $164.98 \pm 4.02$  cm height; and  $59 \pm 5.31$  kg weight) were randomly allocated to receive either a 8-weeks intervention of training program ( $n = 11$ ) or a control group receiving 8-week of normal training only ( $n = 11$ ). Subjects were required to read and complete a health questionnaire that collected detailed that confirmed that there was no history of injuries, diabetes or recent surgery.

### Training Protocol

The content of the training program using ropes rubber has been done according to the following:

The objectives:

- Muscle development ability of the legs at the vertical and horizontal muscle and the ability of the arms.
- Improving the level of concentration of attention and response speed motor skills (Pas de chat, Changement, Sissonne) in the ballet.

The foundations:



The implementation of the content of the training program in accordance with the following scientific

- To achieve the target program for which it was put.
- At the beginning of the module must be given a range of elongation and flexibility exercises to prepare the muscles working in the performance of then prolong the exercises in the end of the module.
- Must not exceed the number of training modules (3) units per week while stress does not get to the student.
- Give breaks between groups ranging from (1: 2) minutes to restore hospitalization.
- Taking into account the principle of gradual strongly pregnancy with a method of interval training is high intensity so that no less intensity (60%) and not more than (90%) with gradual increase frequencies and groups.
- Diversification of resistance exercises (twolegs - two arms - trunk) to fatigue or excessive pressure.
- Begins the severity of pregnancy in the first four weeks of the program strongly medium ranged between (60%: 70%) and ranged between groups (5:8) groups and ranged between iterations (15:20)times.
- Begins the severity of pregnancy in the second four weeks of the program strongly ranged from high (75%: 90 %) and the number of groups (3) groups, and ranged between iterations (8:14) time.
- The researcher Butte rubber cord from the middle to increase the intensity and thus increase the number of iterations in the second half of the program.
- Taking into account the factor of security and safety during the implementation of the program.

#### Procedures

Subjects were assessed before and after an 10-week training program Tests followed a general warm-up that consisted of running, calisthenics, and stretching.

**Vertical Jump Test:** The subject stands by their side touching a wall and reaches up with the hand closest to the wall. Keeping the feet flat on the ground, the point of the fingertips is marked or recorded.

This is called the standing reach height. The athlete then stands away from the wall, and leaps vertically as high as possible using both arms and legs to assist in projecting the body upwards. They attempt to touch the wall at the highest point of the jump. The difference in distance between the

standing reach height and the jump height is the score. The best of three attempts is recorded.

**Standing Long Jump Test (SLJT):** The subject stands behind a line marked on the ground with their feet slightly apart. A two-foot take-off and landing is used, with the swinging of the arms and bending of the knees to provide forward drive. The subject attempts to jump as far as possible, landing on both feet without falling backwards. Three attempts are allowed.

**Seated Medicine Ball Throw (SMBT):** The subject sits with their back to a wall on a mat facing the area to which the ball is to be thrown with their feet extended and slightly apart. The ball is held with the hands on the side and slightly behind the center.

The ball is brought to the chest, and then thrown vigorously out as far as possible. The back should remain in contact with the wall at all times. Three attempts are allowed. The distance from the wall to where the ball land is recorded. The measurement is recorded to the nearest 10 cm. The best result of three throws is used.

The performance levels of jumps

- Pas de chat
- Changement
- Sissonne

#### Statistical Analysis

All statistical analyses were calculated by the SPSS statistical package. The results were reported as means and standard deviations (SD). Wilcoxon signed-rank test (non-parametric statistical hypothesis test) used to determine the differences.  $P < 0.05$  was considered as statistically significant.

#### Pre measurements:

Measurements were made to tribal research variables selected on the two sets of research (experimental - control) in the period from 31/10/2010 to 4/11/2010.

The application of the proposed training program:

The implementation of a training resistance ( chords elastic ) and focus attention and speed of response kinetic skills proposed in the period from 7/ 11 to 2/1/2011 the experimental group for a period of 8 weeks, (3) training units per week have been trained in the experimental group of the time (8.00 : 8.45 ) AM Sunday, Tuesday and Thursday of each week, and the control group using the training approach of the time (8.00 : 8.45 ) am on Saturdays, Mondays, Wednesdays , and the researcher training for my search has been recycling collections all (4) weeks in order to preserve the experimental setting.

#### Post measurements:

Post measurements were made for research groups (experimental - control) from 3 /1 to 10/1/2011 the same arrange premeasurements.



## Results

Table (1) Showed the differences between the pre and posttests for the experimental group in physical variables, ballet jumps, attention focus and motor responding

Variables	Group	Ranking number	Mean of ranks	Sum of ranks	Z	Sign.
<b>Vertical Jump</b>	+	9	2.00	18.00	- 2.44	0.020
	-	2	1.00	2.00		
<b>Standing Long Jump</b>	+	9	1.00	9.00	- 2.87	0.009
	-	2	0.05	1.00		
<b>Seated Medicine Ball Throw</b>	+	9	2.50	22.5	- 2.80	0.012
	-	2	1.00	2.00		
<b>Sissonne</b>	+	9	3.50	31.50	- 2.68	0.001
	-	2	3.00	6.00		
<b>Pas de chat</b>	+	9	3.00	27.00	- 2.76	0.012
	-	2	2.50	5.00		
<b>Changement</b>	+	9	4.00	34.00	- 2.88	0.019
	-	2	5.00	10.00		
<b>Attention focus</b>	+	9	3.50	31.50	- 2.49	0.003
	-	2	3.50	7.00		
<b>Motor responding</b>	+	9	3.00	27.00	- 2.67	0.002
	-	2	3.00	4.00		

Table (1) Showed significant differences between the two measurements pre and post experimental group in the ability of muscle to the legs on the vertical axis and the horizontal, the ability of muscle of the arms, jumps, Attention focus and Motor responding has achieved distinctions levels signify less than the significance level 0.05.

Table (2) Showed the differences between the pre and posttests for the control group in physical variables, ballet jumps, attention focus and motor responding

Variables	Group	Ranking number	Mean of ranks	Sum of ranks	Z	Sign.
<b>Vertical Jump</b>	+	7	2.00	14.00	- 2.84	0.001
	-	4	1.25	5.00		
<b>Standing Long Jump</b>	+	7	3.50	24.50	- 2.75	0.005
	-	4	2.00	8.00		
<b>Seated Medicine Ball Throw</b>	+	7	2.50	10.00	- 2.69	0.002
	-	4	1.50	6.00		
<b>Sissonne</b>	+	7	2.50	14.50	- 2.82	0.005
	-	4	1.00	4.00		
<b>Pas de chat</b>	+	7	3.50	24.50	- 2.77	0.001
	-	4	2.50	10.00		
<b>Changement</b>	+	7	2.50	14.50	- 2.86	0.007
	-	4	2.00	8.00		
<b>Attention focus</b>	+	7	2.50	17.50	- 2.73	0.001
	-	4	1.50	6.00		
<b>Motor responding</b>	+	7	3.50	24.50	- 2.69	0.000
	-	4	2.50	10.00		

Table (2) Showed significant differences between the two measurements pre and post control group in the ability of muscle to the legs on the vertical axis and the horizontal, the ability of muscle of the arms, jumps, Attention focus and Motor responding has achieved distinctions levels signify less than the significance level 0.05.

Table (3) Showed the differences between the posttests for the experimental and control groups in physical variables, ballet jumps, attention focus and motor responding

Variables	Group	Ranking number	Mean of ranks	Sum of ranks	Z	Sign.
<b>Vertical Jump</b>	Experimental	9	3.00	27.00	- 2.58	0.003
	Control	2	1.50	3.00		



<b>Standing Long Jump</b>	Experimental	9	2.00	18.00	- 2.76	0.001
	Control	2	1.00	2.00		
<b>Seated Medicine Ball Throw</b>	Experimental	9	2.00	18.00	- 2.26	0.005
	Control	2	0.50	1.00		
<b>Sissonne</b>	Experimental	9	3.00	27.00	- 2.84	0.001
	Control	2	2.50	5.00		
<b>Pas de chat</b>	Experimental	9	3.00	27.00	- 2.69	0.001
	Control	2	1.50	3.00		
<b>Changement</b>	Experimental	9	3.50	31.50	- 2.57	0.005
	Control	2	1.50	3.00		
<b>Attention focus</b>	Experimental	9	4.00	36.00	- 2.84	0.002
	Control	2	2.00	4.00		
<b>Motor responding</b>	Experimental	9	2.50	22.50	- 2.64	0.001
	Control	2	1.00	2.00		

Table (3) Showed significant differences between the posttests for experimental and control groups in the ability of muscle to the legs on the vertical axis and the horizontal, the ability of muscle of the arms, jumps, Attention focus and Motor responding for the experimental group. the significance level 0.05.

Variables	Unite	Experimental group			Control group			Diff.
		Pre	Post	Rate	Pre	Post	Rate	
<b>Vertical Jump</b>	Cm	24.72	40.95	65.66	23.54	27.42	16.48	49.18
<b>Standing Long Jump</b>	Cm	127.95	198.00	54.75	126.57	140.15	10.73	44.02
<b>Seated Medicine Ball Throw</b>	M	2.46	4.50	82.93	2.39	2.60	8.79	74.14
<b>Sissonne</b>	Degree	5.18	9.00	73.75	5.22	6.45	23.56	50.19
<b>Pas de chat</b>	Degree	5.12	8.88	73.44	5.18	6.30	21.62	51.82
<b>Changement</b>	Degree	5.15	8.89	72.62	5.20	6.22	19.62	62.00
<b>Attention focus</b>	Degree	11.24	19.23	71.09	11.23	12.53	10.37	60.72
<b>Motor responding</b>	Degree	2.42	4.51	86.36	2.51	3.44	27.03	59.32

Is clear from Table (4) than the experimental group on members of the control group in the rate of change measurement posttest for tribal concentration level of attention and speed of response kinetic under discussion ranged from rates of change between (71.09%: 86.36%) of the experimental group, while ranged between (10.37%: 27.03%) of the control group ranged between margin (50.19%: 62. %).

### Discussion

Theresearcher attributed the improvement in the muscle power of legs and arms and the level of concentration of attention and speed of the motor response to the performance and reliability under ballet to the effectiveness of resistance exercises using elastic cords, which Takes into account the intensity of training loads rationing, gradient from easy to difficult in the implementation of resistance exercises to suit the nature of the sample in terms of physical and technical level. In addition to the diversity of exercises for different muscles working (the legs - arms - trunk) in jumps which contributed to the development of muscle power of legs and arms. As well as exercises to attention focus and motor response speed to perform jumps in all of this helped worn to perform jumps in ballet efficiently.

According to (Abdul Hamid, 1989) that the process a sense of individual relations successive and continuous longer is very important in sports activity where incumbent on the student to have a sense of full -time it takes repetitive movements to be able to determine the speed of motor performance and access to a higher level stops to a large extent on growth and improve aspects of attention to varying degrees.

In this regard, (Allawi, 2002) indicated that in the case of motor performance of the player, the brain convey nervous payments to the muscles to produce the intended motor performance. As the same nerve payments occur in the brain and muscles when you perception of the student movements without her actual performance.



This is consistent with (Kevin, 1994; Lydia, 1995; Ahmed, Emad 1995; Mohammed, 2000; Paavolainen, et al., 1991; Treiber, et al., 1998; Heba, 2004; Fayza, 2006; Rabab, 2006) that the effectiveness of resistance training in the development of muscle power of legs and arms and improve level of jumps performance in rhythmic exercises, ballet and gymnastics skills.

This result is also consistent with what referred to the (Nagah, 1991) that the jump is a major part in the ballet. The movements that require smooth performance and correlation between muscle contractions and relaxation and strength characteristic speed.

In this regard refers to (Elbek, 1997) to the importance of capacity development muscle of the legs and arms as an essential component to show many of the other physical attributes as well as to demonstrate the performance skills are good. This can be achieved only resistance exercises responsible for the development of muscle power.

The researcher attributed the improvement in the muscle power of legs and arms for the control group to the attention of the educational process lists for items worn male and female special physical preparation and focus on the technical aspects of the skills in the art of ballet.

In addition to lists of attention on the educational process of trying to teach students of different jumps in worn constantly and the presence of the parameter during the practical part. And providing verbal reinforcement and repair of technical errors as they arise all this has led to a slight improvement in the level of the students in the focus of attention and speed of response to perform kinetic (Pas de chat, Changement, Sissonne)

This is consistent with (Elbek, 1997) that during the preparation period realized all the basic duties to ensure success as it allows the functional base for the performance of large volumes of work specialization as well as the development of physical attributes and motor experiences.

In this regard refers (Mohammed, 1997) to the importance of capacity development exercises where the muscle development is the very foundation of physical performance and sports practice. Resistance training is the important one of the key exercises to develop the capacity and improve muscle.

In the view of the researcher to take both the attention and response a great deal of importance in the field of sports they represent elements of the elements of the success of any movement performed by the athlete, the fact that the performance of any skill required of the student excitability senses are all in order to transmit information to the brain, to get a valid response and the right time has, any

attention that precedes the response, it is the case of pre-performance, response is the case of reaction to the perceived interesting, as it focuses on the most important student realize threatening stimuli into performance, and in a moment what it is to configure a quick and accurate response commensurate with the position fronting

Arguing that (Allawi, 2002) that whenever the time available or required for the attention of the student to sexy relatively short whenever the student is better able to focus the attention on the exciting himself and thus its ability to respond faster and more accurately and reverse it if more time is available or required contributed to make more of an effort to try to focus, leading to a delayed response.

That is consistent with the study (Emad, 1996) that the development of focused attention and motor response is working to develop locomotor rhythm and level of technical performance.

### Conclusions

Within the limits of the objectives and hypotheses and research procedures and the presentation and discussion of results researcher reached the following conclusions:

- The proposed program using elastic cords exercise leads to improved muscle power of legs and arms.
- The program used in the control group students leads to improved muscle power of legs and arms.
- The proposed program using the exercises to focus attention and motor speed of response leads to improved level of jumps performance (Pas de chat, Changement, Sissonne) in the ballet.
- The program used in the control group students leads to improved level of jumps performance (Pas de chat, Changement, Sissonne) in the ballet.
- Outweigh the experimental group to the control group students in the muscle power of legs and arms and the level of concentration of attention and motor response speed and level of jumps performance (Pas de chat, Changement, Sissonne) under discussion in the ballet.

Recommendations: Within the limits of the research sample in the light of its findings the researcher recommends the following:

- Increased attention to the development of physical and mental capacity affecting other level of jumps performance (Pas de chat, Changement, Sissonne) in ballet.
- Attention prolongation drills and flexibility before and after the performance of resistance exercises because of its great importance Access to the positive results in the development of muscle power of legs, arms and level of jumps performance (Pas de chat, Changement, Sissonne) in ballet.



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