

## ***"The Impact of the Collisions Exercisc use at the Level of Some Physical Variables and Perform within Some Leaps in Ballet"***

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### ***Introduction and research problem***

*The scientific and educational aspects of the training process can be achieved only through our understanding of the various sciences associated with the training process, including physiology and chemistry, which show us the extent of the responses, adaptations and changes that the training takes in different types (physical-skill-schematic-psychological)*

*The motor expression is one of the contemporary motor activities characterized by aesthetics and good emotional expression. It is characterized by a coherent homogeneous motility consisting of jumps, pivots, balance, rhythmic movements, dance, and musical accompaniment that express the beauty and smooth movements of the creative artistic performance of movements And different body skills which are characterized by diversity and creativity. (18: 93) (92:22)*

*Ballet is one of the most important types of motor expression and the best means to help achieve many of the purposes of physical education, which works to form and build the body and the establishment of the moderate body good beside the enjoyment of overall fitness, which is the basis of the construction of many activities such as gymnastics, exercise and other activities. : 23) (85:27)*

*Ballet requires hard and violent training to reach the proper level of skill performance. Ballet is not only the beauty shown by the movements, but the strength and capacity that lies in the human body that the eye sees. It is the clear motor expression of the deep psychological movement, inner feeling and the original psychological thinking that emerges through ballet. It is a translation of thoughts and sensations into an expressive motif (102: 2)*

*Ballet is one of the important mobility activities to give the body the strength and ability to move with ease and flexibility, which works to raise the level of motor performance of female students, which is also an important means to form and build the body and gain good strength, it gives its practitioners an impressive mathematical body and direct impact on vital devices (65:25)*

*The jump is one of the most important elements of Ballet is characterized by difficulty and high level of performance, so requires a long period of time for training and exercise and need to be able to withstand the endurance to master the various basic movements It is said that the dancer who wants to reach the ladder of fame to buy his glory by training and effort The continuous (54:26) (28: 107)*

*And jump is a group of movements that require great skill to control the muscles of the body in general and the muscles of the two men in particular, so it is one of the most important cornerstones, and when mentioning the word jump comes to the listener height from the ground, but there is another thing does not need to rise, Until the toes touch the ground. (68:21) (68: 9)*

*Jumping on the trampoline is one of the best and most practiced exercises that can be exercised because recoil exercises are the most effective and effective exercises known to humans and jumping on the trampoline is a low impact exercise which forms muscle and improves harmony. There are many advantages and advantages of jumping on trampoline. 45:12*

*The concept of crash training is attributed to an expert from the former Soviet Union, Verkhanski, who launched this kind of training with shock training, also known as Reactive Strength Exercises, derived from the nature of plauometric exercises.*

*Donald Shaw (2008) notes that crash training is characterized by high intensity by directly affecting the musculoskeletal system and connective tissue (18: 3,4)*

*Collision training is a set of exercises designed to develop muscle elasticity through the so-called elongation and shortening cycle. It is a special method for developing explosive ability and depends on the moments of wrestling and braking that occur as a result of the weight of the body in its dynamic movement such as jump back. The development of muscular capacity thus improves the dynamic performance of movements (24: 380)*

*Coincidence is a central muscle activity to improve the level of strength based on a physiological fact that the muscle can exert greater force or effort if it is prolonged before movement. (16:20)*

*And that collision training works to stimulate the strength in the movements of training through the exploitation of motor activity resulting from the fall of gravity in the reversal of the direction of muscle work. (24:1)*

*And that the exercises that depend on the energy of rubber and the work of sensory receptors reflect the most useful to reduce the time period between prolongation and shortening and the energy stored in the muscles due to lengthening at rapid rates during the phase of contraction and participate in the first moments of the second (10: 42,43)*

*The researcher noted the low performance of some of the female jumpers and the inability of female students to perform some formations of the ballet group and the inability of female students to perform these jumps well. The jump with the two men in the air - jump with the opening of the man and the inclusion quickly) scheduled for the students of the first division of the college also noted the researcher a decline in the level of some physical qualities that help to perform the jumps assessed correctly and through the study of study*

*T research and the researcher found that the style of the best training confrontational instruction and teaching methods in muscle development ability of the two men, prompting the researcher to conduct this study to identify the impact of the effect of the use of the exercises on the level of some confrontational physical variables and perform some jumps in ballet*

### **Research goal**

*The aim of the research is to identify the effect of the use of collisions on the level of some physical variables and the performance of some jumps in ballet*

### **Research hypotheses**

*-There are statistically significant differences between the averages of pre and post measurements in the level of some physical and the disease of some jumps in Balia in the experimental group.*

*-There are statistically significant differences between the averages of the pre and post measurements at the level of some physical and the disease of some jumps in Ballet in the students of the control group.*

*-There were statistically significant differences between the two dimensions of the measures of the two dimensions of the experimental and control groups in*

the level of some physical and the disease of some jumps in Ballet and for the benefit of the experimental research group.

Research Plan and Procedures:

### Research Methodology:

The researcher used the experimental method in the design of the post pre measurement of the two groups, one experimental and the other an observer, in order to suit the nature of the research.

### The research sample

The sample of the research was chosen in a deliberate manner and the number of (28) students of the first class in the Faculty of Physical Education, Beni Suef University in the second semester of the academic year 2014-2015 of the total research society (104) students were excluded (8) (20) students by (19.23%) and were randomly divided into two equal groups as follows:

-The experimental group and resisted (10) students used jump ladder and trampoline.

-The control group and its strength (10) students used the traditional method.

Table (1)

Equivalence of the research sample in variables (age, height, weight) and the level of physical variables And the performance of the jumps in the sample N = 28

Variables	Measure unit	SMA	Mediator	Standard deviation	Torsion coefficient
Age	Year	16.53	16.0	0.92	0.91
Height	Cm	162.3	162	3.87	1.9
Weight	Kg	62.67	62.5	7.11	1.8

It is clear from the previous table (1) that all the values of the arithmetic mean exceed the values of the standard deviations, and that all the values of the torsion coefficients were limited to (+-3) indicating homogeneity of the sample and free of the defects of the non-modal distributions in the physical and psychological variables.

-Table of equivalence of the research sample in the physical and psychological variables and the level of performance of the jumps:

**Table (2)**  
**Significance of statistical differences between the control and experimental groups in each Growth rates and some jumps in ballet are under consideration (N = 20)**

Variables	Measu re unit	Control group (N = 10)		The experimental group (N = 10)		Calculated value (t)	Statistical significance	
		M	E	M	E			
Growth rates	Age	Year	16.53	0.92	16.12	0.82	0.78	Not indicted
	Height	Cm	162.3	3.87	159.5	3.67	0.53	Not indicted
	Weight	Kg	62.67	7.11	61.9	7.01	0.92	Not indicted
Physical variables	The muscular capacity of the legs	Cm	22.5	1.10	22.8	1.12	0.25	Not indicted
	Flexibility	Cm	5.5	1.36	5.6	1.01	0.68	Not indicted
	Endurance power	No	12.5	0.96	12.7	1.25	0.82	Not indicted
	Compatibility	S	11.5	0.65	11.6	0.97	0.44	Not indicted
	Fitness	S	10.9	0.82	10.8	1.32	0.63	Not indicted
Level of jumps	pas de chat	Degree	3.11	1.12	3.19	1.15	0.74	Not indicted
	Sissonne	Degree	3.98	1.36	3.80	1.24	0.88	Not indicted
	Changement de pieds	Degree	3.20	1.14	3.15	1.01	1.58	Not indicted
	Echappé	Degree	3.21	0.62	3.25	0.25	1.11	Not indicted

The value of (t) the table at the level of significance (0.05) = 2.03

Table (2) shows that there are statistically significant differences between the control and experimental research groups in each of the growth rates and the level of some physical variables and the level of performance of some of the jumps in question. 0.05) indicating their equivalence in those variables.

#### Data collection tools :

##### First: The tools and tools used in the research

- 1-Resistameter to measure length.
- 2-Medical balance to measure the weight.
- 3-Chalk to determine the signs of start and end tests.
- 4-A cassette recorder for the music used in the program.
- 5-All expression motor to implement the program.
- 6-Digital clock rounded to the nearest (0.01) w.
- 7-The number of (2) trampoline.
- 8-The number of (6) jump ladder.

##### Second: Tests Used: Annex (2)

- 1 -Vertical jump test of stability to measure the muscular capacity of the two men.

ϒ -Test the extension of arms in front of the sitting length.

ϒ -Test stand from the slack and push the two men to measure the tolerance of force.

ξ .Test digital circuits to measure compatibility.

ο -Sprinting test to measure the level of fitness.

### **Third: Expert Opinion Survey Form:**

ϒ -Expert feedback questionnaire on the training program. Annex (5)

ϒ -Expert feedback form on the tests used. Annex (5)

ϒ -.Registration form for female students.

### **Fourth: Evaluation of the performance of the jumps in question:**

The level of performance was assessed by a committee composed of (3) members of the teaching staff in the sports training section (5). The grade was calculated from (10) grades for each skill. The three grades were collected and the total was divided by three to calculate the student's score. By dividing the total degree of skill as follows:

(ϒ) •degrees of elevation.

(ξ) •degrees of genealogy of motion.

(ϒ) •Degrees for landing.

-Proposed program using the collision exercises in Balinese- :

### **Objective of the proposed program:**

The aim of the proposed program is to use the crash training to develop some physical variables and improve the level of some jumps in ballet, through:

Impact of crash training on some physical variables under study.

Impact of the crash training on improving the skills of jumping in ballet

### **Time distribution for the search experiment:**

(8) weeks, and the number of teaching units per week (2 units per week) and teaching unit time (60) minutes, divided as follows:

\* Physical configuration (20) minutes. \* Physical preparation (15) minutes.

\* Main part (20) minutes \* Closing (5) minutes.

View and discuss the results:

First: View results:

**Table (3)**

**The significance of statistical differences between the averages of pre and post measurements in physical variables and the level of performance of some ballet jumps in the experimental group N = 10**

Variables	Measure unit	Pre measure		Post measure		Difference between the two averages	Improvement rate	Calculated value (t)	
		M	E	M	E				
Physical tests	The muscular capacity of the legs	Year	22.8	1.12	35.1	1.2	12.30	53.94%	3.80*
	Flexibility	Cm	5.6	1.01	9.5	1.6	3.90	69.64%	3.95*
	Endurance power	Kg	12.7	1.25	17.2	1.54	4.50	35.43%	4.60*
	Compatibility	Cm	11.6	0.97	8.9	1.60	2.70	30.33%	4.25*
	Fitness	Cm	10.8	1.32	8.5	1.14	2.30	27.05%	3.99*
The level of the performance jumps	pas de chat	Degree	3.19	1.15	5.80	0.90	2.61	81.81%	3.80*
	Sissonne	Degree	3.80	1.24	6.10	0.02	2.30	60.52%	4.65*
	Changement de pieds	Degree	3.15	1.01	5.98	0.15	2.83	47.32%	5.95*
	Echappé	Degree	3.25	0.25	6.12	0.18	2.87	88.30%	4.18*

\* Tabular value (T) at the level of 0.05 = 2.09

Table (3) shows statistically significant differences between the pre and post measurements in the physical variables and the level of performance of some jumps for the sample and for the sake of post measure .

**Table (4)**

**The significance of statistical differences between the averages of pre and post measurements in physical variables and the level of performance of some ballet jumps in the control group N = 10**

Variables	Measure unit	Pre measure		Post measure		Difference between the two averages	Improvement rate	Calculated value (t)	
		M	E	M	E				
Physical tests	The muscular capacity of the legs	Year	22.5	1.10	26.5	1.12	4.00	17.77%	3.12*
	Flexibility	Cm	5.5	1.36	6.7	1.01	1.20	21.81%	2.90*
	Endurance power	Kg	12.5	0.96	15.8	1.65	3.30	26.40%	4.6*
	Compatibility	Cm	11.5	0.65	10.9	1.68	0.60	5.50%	4.8*
	Fitness	Cm	10.9	0.82	10.4	1.67	0.50	4.80%	3.10*
The level of the performance jumps	pas de chat	Degree	3.11	1.12	4.2	1.20	1.09	35.04%	2.12*
	Sissonne	Degree	3.98	1.36	4.8	1.6	0.82	20.60%	3.90*
	Changement de pieds	Degree	3.20	1.14	5.1	1.98	1.90	59.37%	4.11*
	Echappé	Degree	3.21	0.62	5.12	0.91	1.91	61.21%	3.88*

\* Tabular value (T) at the level of 0.05 = 2.09

Table (4) shows the existence of statistically significant differences between the pre and post measurements in the physical variables and the level of performance of some jumps for the sample and for the sake of telemetry.

**Table (5)**

**The significance of the statistical differences between the averages of the two dimensions in the variables Physical and performance level of some jumps in the experimental and control groups**

Variables	Measure unit	The experimental group		Control group		Calculated value (t)	
		M	E	M	E		
Physical tests	The muscular capacity of the legs	Year	35.1	1.2	26.5	1.12	2.24*
	Flexibility	Cm	9.5	1.6	6.7	1.01	3.65*
	Endurance power	Kg	17.2	1.54	15.8	1.65	3.90*
	Compatibility	Cm	8.9	1.60	10.9	1.68	2.65*
	Fitness	Cm	8.5	1.14	10.4	1.67	2.92*
The level of the jumps	pas de chat	Degree	5.80	0.90	4.2	1.20	3.84*
	Sissonne	Degree	6.10	0.02	4.8	1.6	2.24*
	Changement de pieds	Degree	5.98	0.15	5.1	1.98	3.65*
	Echappé	Degree	6.12	0.18	5.12	0.91	3.54*

Value (T) at the level of 0.05 = 2.03

Table (5) shows statistically significant differences between the two dimensions of the experimental and control groups in the physical variables and the level of performance of some tests for the sample and for the benefit of the experimental group.

### Discussion of results

It is clear from Table (3) that there are statistically significant differences between the pre and post measurements in the physical variables and the level of performance of some jumps for the sample and for the benefit of the telemetry where the calculated value (t) is greater than the tabular value at the significance level (0.05) Which has affected the level of physical characteristics and reflected its development at the level of jump in Ballet.

The researcher returns these results to the collision training which contains a set of skills and jumps that lead to the trampoline and jump mechanism, which helps to improve the level of jump and jump, cross-sectional and vertical and improve the level of jump in Ballet.

The tools and tools that help to acquire physical qualities and physical fitness, and is a factor in helping to raise the level of technical performance of skills, and the lack of boredom and add the element of thrill by training on tools and aids, and is characterized by cheap and easy to use and distribute and collect (16: 34, 35)

In this regard, Mohammed Abdul Aziz (2002) states that the trampoline aids and devices provide sensory experiences that enrich the educational

*situation and consolidate information in the learner's mind of the chosen skills and call attention to him, which increases his ability to learn and facilitate the process of teaching the teacher (15: 9).*

*Fitness is one of the important variables for ballet. Fitness, flexibility, compatibility, muscular endurance and balance are among the most important elements required for ballet, so their development requires the use of tools such as trampoline and jumping.*

*The researcher also agrees with Najah Al-Tuhami (2002) that the tools and teaching aids help to transfer the teacher's experience directly, in the least time and with the least possible effort, and with a condition of stabilization (17:37)*

*This is consistent with the study of both Heba Mohammed Saeed (2004), 19 Huda Rizki and Ismail Ibrahim (2005). (20) The results of their studies indicated the importance of the use of educational aids (trampoline and jumping) in improving skill performance in various sports activities.*

*It is clear from Table (4) that there are statistically significant differences between the pre and post measurements in the physical variables and the level of performance of some jumps for the sample and for the benefit of the telemetry. The researcher attributed this improvement to regularity in the practical lectures for the students of the control group.*

*The researcher found that the improvement of the control group on some physical variables and self-confidence in ballet may be due to the regularity of students in ballet in the application of the program (traditional), as this improvement is due to the method used (traditional) has made progress on some level And the self-confidence in ballet. The progress shown in the results of the control group is a logical and acceptable result. It is assumed that the (traditional) method of instruction is subject to scientific foundations. The researcher taught both groups without bias and followed the same method Basic under study except for your part by using the proposed exercises with*

#### *Tramplng*

*This is in line with what Sami Hassan, Abdulsalam Ali (1998) has pointed out that the method used in the teaching staff is the distinctive form in the implementation of the lesson that the teacher takes as a means of teaching. The educational means will coordinate the interaction between the students and improve their psychological skills. Cooperation and self-confidence (5: 72)*

*It is clear from Table (5) that there are statistically significant differences between the two dimensions of the experimental and control groups in the*

*physical and psychological variables and the level of performance of some tests for the sample and for the benefit of the experimental group.*

*The researcher finds that the superiority of the experimental group to the control may be due to the use of trampoline exercises. It highlights the importance of using the proposed exercises for their positive effect on some physical variables in ballet, which is an effect that emphasizes the importance and effectiveness of the use of teaching tools and aids in Ballet.*

*The researcher explained the superiority of the experimental group to the use of the program of training exercises, collision and the implications of the diversification, which has increased the factor of excitement and excitement of students for the effective practice and the desire for exercise as it is characterized by constant challenge and continuous and the integration of exercises for trampoline and jump management led to a positive change in (7) in the importance of upgrading the level of jumps in ballet to influence the skillful sentence.*

*The researcher explained the improvement of the experimental group in some of the physical variables and psychological skills in the ballet under study to use trampoline exercises and jump rope, and may be due to the trampoline and jump rope is their use is characterized by the thrill and educational excitement of ballet students and urged them during the training period.*

*The researcher agrees with the opinion and results with both Mohamed Abdel Aziz (2002), 15 Nasser El Sayed (2006), 16 Huda Rizki, Ismail Ibrahim (2005) (20) that the tools and assistive devices activate the process of education and facilitate the performance of movements*

*With the economy in the effort and time and that the teacher must choose educational means that attract the attention of the learner and meet his wishes and we can distinguish in individual differences, because they used in their study new tools have had a positive and effective influence in learning different skills.*

### **Conclusions**

*-The impact of the use of crash exercises to jump on the level of physical attributes (muscle capacity - flexibility - the tolerance of power - compatibility - fitness) Ballet students.*

*-The impact of the use of crash training on the level of jumps among Balinese students.*

### **Recommendations**

*-The use of trampoline exercises and jump rope because of its positive impact in improving the level of jumps in Balinese.*

*-Conduct further studies on the importance of using trampoline and jump ladder in improving physical variables in different sports.*

*-Expand the use of aids in the development of physical qualities to improve the skillful performance in Balinese.*

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