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Collision training and its impact on the accuracy and speed of offensive skills in the sport of taekwondo for the youth category

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ABSTRACT

(Chapter One) **included the** importance and problem of the research, the importance of collision training and its impact on the accuracy and speed of offensive skills, and these exercises work on developing the muscular ability to execute, kick and punch at a high level, especially that it is to calculate points in the sport of taekwondo, and the research aims to study this relationship to determine its effectiveness in developing the technical performance of players. The experimental method was used for two different groups, one experimental and the other control, and the research was applied to part of (30) players in the age stage (14-16) years old who are registered in the Iraqi Taekwondo Federation at the Police Sports Club , while **(the third chapter)** included the presentation and discussion of the results of the physical variables between the pre- and post-tests that there are differences in favor of the post-test, but **(Chapter Four)** The researcher concluded that the training program for collision training is an effective method in developing the accuracy and speed of offensive skills among young taekwondo players , and it also has a clear role in increasing the speed of reaction and achieving a balance between strength, accuracy and speed in the performance of offensive skills, as well as developing self-confidence and raising their level of concentration during the execution of movements. The need to include collision training in the regular training plans for taekwondo players for the youth category, as it has a positive impact on the development of offensive skills

1- Introduction to the Research:

(Chapter One) **included the** importance and problem of the research, the importance of collision training and its impact on the accuracy and speed of offensive skills, and these exercises work on developing the muscular ability to execute, kick and punch at a high level, especially that it is to calculate points in the sport of taekwondo, and the research aims to study this relationship to determine its effectiveness in developing the technical performance of players. The experimental method was used for two different groups, one experimental and the other control, and the research was applied to part of (30) players in the age stage (14-16) years old who are registered in the Iraqi Taekwondo Federation at the Police Sports Club , while **(the third chapter)** included the presentation and discussion of the results of the physical variables between the pre- and post-tests that there are differences in favor of the post-test, but **(Chapter Four)** The researcher concluded that the training program for collision training is an effective method in developing the accuracy and speed of offensive skills among young taekwondo players , and it also has a clear role in increasing the speed of reaction and achieving a balance between strength, accuracy and speed in the performance of offensive skills, as well as developing self-confidence and raising their level of concentration during the execution of movements. The need to include collision training in the regular training plans for taekwondo players for the youth category, as it has a positive impact on the development of offensive skills.

Chapter One:

1-1 Introduction and Importance of the Research:

The importance of this research comes from the fact that the sport of taekwondo is one of the combat sports that relies heavily on speed and accuracy in the implementation of offensive skills, as these skills represent the main element in achieving positive results during official competitions. Hence, the need to use modern and effective training methods such as (collision training), which is one of the important means to develop the physical and technical aspects of players, especially in the stages of age gradations such as the youth category.

By studying the impact of these trainings on the key aspects of performance (accuracy and speed), the researcher can provide scientific training programs that help coaches and players develop technical performance and achieve better results in local and international tournaments.

The great development in modern coaching methods is due to the increasing demand for scientific principles in the search for new methods of training players, and relying on these principles in planning and establishing training programs that lead to a higher degree of numerical development.

Impact training :(2018 Healy, Robin) points out that impact training is based on the physiological principle that a muscle can exert more force, energy, or effort when stretched before moving it, and this is called impact training. In addition, the energy stored in the muscles is released as a result of stretching during the contraction phase of contraction, and this is also involved in the early moments of the second stage..

As noted by Chu, Donald Alien (2018): Impact training consists of a series of exercises aimed at increasing muscle flexibility, achieved through a stretch-and-shorten cycle, which is a specific method of increasing muscle strength. This training is based on the accumulation of moments of

acceleration and slowdown caused by body weight during movement, such as the rebound jump, which increases the performance of dynamic movement. It is also characterized by its high intensity, which directly affects the neuromuscular system and connective tissues..

He also pointed out (:(2010 Gametta.R Impact training is related to rebound strength training, and this name is derived from the nature of plyometric training, and these exercises are safe and useful because they are enjoyable exercises that increase the strength and rebound of the connective muscle tissue and its elasticity during the full range of the joint and at various speed speeds due to the sudden extension of the muscle followed directly by a high speed shortening, which increases the effectiveness of the use of force by improving the neuromuscular skill of movement.

Khairia Ibrahim Al-Sukkari et al. (2005) pointed out that collision training includes deep jump and box jump exercises, and these exercises are more accurate in producing high-efficiency thrust, as we often need the fast and distinct continuity of the lengthening and shortening cycle movements.

Ahmed Saeed Zahran (2012) mentions: The sport of taekwondo is considered one of the competitive combat activities that is characterized by the use of punches and kicks with rotation in the middle and the performance of circular and backward movements with the aim of scoring points and winning, and it is characterized by the changing dynamic according to the different playing situations, which requires the player to have multiple and varied reactions in the use of defense and attack methods in addition to the movements of the feet, all of which are non-repetitive methods that are predominantly dynamic work in most seconds of the match with the continuation of quick performance for periods Long.

As Mahmoud Taher (2019) pointed out: Taekwondo is one of the individual sports that depends on the rapid and continuous change of different playing situations, which requires the player to have a high ability in the accurate selection of the various technical methods most commonly used with the changing positions of both the attack and defense processes.

Therefore, attention should be paid to training combat players in the sport of taekwondo to master the different kicks and punching, through collision training, which works to develop the muscular ability to execute kicks and punch at a high level, especially that to calculate points in the sport of taekwondo requires the performance of kicks and punching According to certain criteria including the right place of the kick, good posture, athletic posture of the body, effective strong application, perception and concentration, the right timing, the right distance with the right speed and strength.

1-2 Research Problem:

The research problem appears in the existence of a gap in the use and exploitation of collision training as an effective means of developing the basic technical aspects of the sport of taekwondo, especially in the youth stage, which leads to the lack of optimal exploitation of their potentials, where when taekwondo players are trained on various skills, as it is done in a traditional way that is not codified, which affects the players by decreasing in the level, it results in the lack of effective strong application and not using the appropriate force and speed to reach the skill in the right place, and thus not There is also a relative absence of applied studies and researches that deal with the effect of these exercises on the elements of technical performance such as accuracy

and speed, which prompts the researcher to study this relationship to determine the extent of its effectiveness in developing the technical performance of players.

1-3 Research Objectives:

The research aims to identify the impact of collision training on the accuracy and speed of offensive skills in the sport of taekwondol in the youth category. This is done through the following sub-objectives:

1. To determine the differences between the pre- and post-test averages of the experimental group with regard to the effects of collision training on the accuracy and speed of offensive abilities in taekwondo.
2. Distinguish between the pre- and post-training averages of the control group with regard to the effects of collision training on the accuracy and speed of offensive abilities in taekwondo.
3- Identifying the differences in telemetry of the experimental and control groups in the effect of collision training on the accuracy and speed of offensive skills in the sport of taekwondo.
4- Developing a proposed training program based on collision training to raise the level of technical performance of taekwondo players.
5- Contributing to enriching the scientific and applied aspect in the field of taekwondo training.

1-4 Research Hypotheses:

1- There are statistically significant differences between the pre- and post-measurements of the experimental group in the effect of collision training on the accuracy and speed of offensive skills in the sport of taekwondo in favor of telemetry.
2- There are significant differences between the pre- and post-measurements of the control group in the effect of collision training on the accuracy and speed of offensive skills in taekwondo, for the purpose of numerical comparison.
3- There are significant differences in the distribution of dimensional measurement numbers for the experimental and control groups in the effect of collision training on the accuracy and speed of offensive skills in the sport of taekwondo in favor of the participants in the experiment

1-5 Research Areas:

1.5.1 Human Field: For the Youth Police Sports Club.
1-5-2 Temporal Domain: (7/4/2019) to (16/7/2019).
1.5.3 Spatial Area: The Great Indoor Hall of the Police Sports Club.

1-6 Research Terms:

Collision training:

It is a series of exercises that target and enhance the strength of the muscles of the legs and arms. It activates the muscle and promotes the production of its maximum strength in the shortest possible time, converting this energy into movement in the opposite direction.

Chapter Two:

2- Broadcasting Method and Field Procedures:

2-1 Research Methodology:

I use the researcher (experimental method), where a sample of young taekwondo players is selected and randomly distributed into two groups.

- Experimental group : Receives a training program based on collision training.
- Control group : Receives the approved routine training program.

2-2 Research Population:

The research population includes Taekwondo players at the Police Sports Club in Baghdad, who are registered with the Iraqi Taekwondo Federation for the sports season, (2019/2020).

2-3 Research Sample:

The research sample was selected by the deliberate method by selecting (30) players for the youth stage (14-16) years old from the combat players (corgi) at the Police Sports Club, including (10) players who were surveyed, and (20) players who were subjected to the basic study, who were randomly divided into two groups, one experimental and the other control, consisting of (10) players for each group.

2-4 Reasons for Choosing the Research Sample:

1- The training age of the player should not be less than five years as a minimum.
2- The player must have a minimum of (2) black belts.

2.5 Typical distribution of the sample studied.

The researcher calculated the torsion coefficient for all the variables under study, to ensure that the basic research sample is moderately distributed, as shown in Table (1) and (2).

Table (1)

The degree of deviation of the research sample variables (age, height, weight, training age)

Torsion	Deviation	Broker	Medium	Unit of Measurement	Variables	m
- 0.30	0.80	15.00	15.10	Year	Age	1
- 0.48	2.56	164.00	164.02	Poison	Length	2
0.10	4.03	64.00	64.50	kg	Weight	3
- 0.70	0.66	5.40	5.35	Year	Training Age	4

Table (1) shows that all the deviation values of the studied sample were between (-0.70 : 0.10) and that these values were limited to (±3), which confirms the homogeneity of the research sample in the variables (age, height, weight, and training age).

Table (2)

The torsion coefficient of the research sample in physical and skill variables

N = 10

Torsion	Deviation	Broker	Medium	Unit of Measurement	Testing	Variables	m
- 0.66	0.45	4.11	3.92	m/s	Speed (3) right hoppers	Physical	1
0.04	0.42	3.71	3.71	m/s	Speed (3) Left Partridges		2
- 0.10	1.51	34.00	33.85	Poison	Vertical Jump		3
- 0.36	15.16	177.40	171.05	Poison	Wide jump		4
- 0.72	4.80	55.40	54.65	W	Original and sub-trends		5

- 1.33	0.36	2.41	2.35	W	Motor balance		6
- 0.58	4.11	- 1.45	- 190	Poison	Bending the torso from standing		7
- 0.40	0.56	6.46	6.32	Degree	Dolyuchaki (Dolio Shagi)	Skill	8
0.13	0.71	5.50	5.90	Degree	Apchuk Dolio Chucky (Apchuk Dolio) Chagy)		9
0.76	0.55	5.45	5.66	Degree	Naryuchaki (Nairyu Chaji)		10
0.10	0.60	6.01	6.14	Degree	Horyochaki (Horyeo Kgaji)		11

Table (2) indicates that all the values of the deviation coefficients of the research sample were between (-1.33: 0.76) and (±3) which shows that the research sample was mostly homogeneous with respect to physical and mental characteristics.

2-6 The parity of the research sample:

The researcher found the equivalence of the research sample for the experimental and control groups in the variables of

(Age - Height - Weight - Training Age) as shown in Table (3), and the variables of harmonic abilities and the level of skill and planning performance under study as shown in Table (4)

Table (3)

The parity of the two research groups in the variables (age - height - weight - training age)

N 1,2 = 10

Value (v)	Difference Between Intermediates	Control Group		Experimental Group		Unit of Measurement	Variables	m
		Deviation	Medium	Deviation	Medium			
0.26	0.10	0.86	15.10	0.78	15.10	Year	Age	1
1.35	2.35	5.35	164.40	1.59	165.50	Poison	Length	2
0.90	1.10	3.24	63.45	1.70	65.80	kg	Weight	3
0.86	0.45	0.70	5.35	1.10	5.80	Year	Training Age	4

The tabular value of (v) at the significance level of (0.05) = 2.10

It is clear from Table (3) that there are no statistically significant differences between the experimental and control groups in the variables (age - height - weight - training age), which indicates the parity between the two stars.

Table (4)

The parity of the two research groups in physical and skill variables

N 1,2 = 10

Torsion	Teams	Control Group		Experimental Group		Unit of Meas	Testing	Variables	m

		Deviation	Medium	Deviation	Medium	urement			
0.55	0.11	0.42	4.00	0.45	3.87	m/s	Speed (3) right hoppers	Physical	1
0.42	0.08	0.42	3.67	0.44	3.76	m/s	Speed (3) Left Partridges		2
1.18	0.78	1.47	34.30	1.50	33.48	Poison	Vertical Jump		3
0.90	6.25	14.25	169.80	16.14	176.15	Poison	Wide jump		4
1.21	2.60	5.61	53.40	3.64	55.00	W	Original and sub-trends		5
1.21	0.20	0.30	2.40	0.42	2.28	W	Motor balance		6
0.15	0.28	4.35	1.78	4.08	-2.10	Poison	Bending the torso from standing		7
0.96	0.31	0.46	6.45	0.71	6.14	Degree	Dolyuchaki (Dolio Shagi)	Skill	8
1.75	0.54	0.70	5.66	0.66	6.21	Degree	Apchuk Dolio Chucky (Apchuk Dolio) Chagy)		9
1.41	0.35	0.47	5.48	0.60	5.84	Degree	Naryuchaki (Nairyu Chaji)		10
0.05	0.02	0.61	6.15	0.62	6.14	Degree	Horyochaki (Horyeo Kgaji)		11

The tabular value of (v) at the significance level of (0.05) = 2.10

Table (4) shows that there are no significant differences between the experimental and control groups in physical and skill variables, which indicates the equivalence between the two groups.

2.7 Data Collection Tools and Means:

Multiple and diverse means were used to collect data in accordance with the nature of the research and the data to be obtained, such as physical tests, a form to evaluate the level of skill performance of combat players (corgi) in the sport of taekwondo, and a set of forms to be presented to experts to determine the most important tests, and collision training appropriate to the nature of the research and sample.

The selection of the expert took into account the following conditions:

1- Holder of a belt score of (4) Dan in the sport of Taekwondo.
2- An international provision for recording measurements for physical and skill tests under consideration.

2.8 Steps to conduct the experiment:

Preparatory Stage:

Selection of assistants:

A group of assistants was selected to help conduct the physical and skill measurements and tests used in the research.

2-9 Survey Studies:

First Survey Study - Objective and Results:

- Identify difficulties in implementing measurements and tests, and identify difficulties

Implement and overcome measurements and tests.

● Ensuring the validity of the tools and devices used in the research and testing them, and ensuring the validity of the tools and devices used in the research and the technical modification of the test positions.

● Have the correct knowledge of how to conduct measurements in practice, and understand the correct ways to conduct measurements and teaching assistants on them.

● Ensuring the validity of the registration forms for measurements and ensuring the validity of the forms

Registration of measurements and training of assistants on them.

2-9 Second Survey Study:

Objective: To find the coefficient of honesty (honesty of differentiation), and the coefficient of stability of variable tests are studied in both physical and practical aspects.

Results: The honesty coefficient for physical and skill variables was found by comparing (10) taekwondo players from the same age with the measurements of a group of players of the same age but they are beginners (less differentiated), and Table (5) shows the honesty coefficient.

Table (5)

Differentiation Validity Coefficient for the Tests Under Study

N 1,2 = 10

Value (v)	The group is less differentiated		Featured Collection		Unit of Measurement	Testing	Variables	m
	Deviation	Medium	Deviation	Medium				
8.11	0.80	4.50	0.35	3.20	m/s	Speed (3) right hoppers	Physical	1
6.02	0.92	4.35	0.31	3.17	m/s	Speed (3) Left Partridges		2
8.76	3.60	38.30	3.57	30.15	Poison	Vertical Jump		3
5.30	25.80	246.70	23.67	142.78	Poison	Wide jump		4
6.04	6.40	47.37	6.06	61.20	W	Original and sub-trends		5
4.66	0.56	3.09	0.29	1.97	W	Motor balance		6
3.70	2.02	4.80	3.51	- 3.00	Poison	Bending the torso from standing		7
6.85	1.10	8.15	0.30	5.16	Degree	Dolyuchaki (Dolio Shagi)	Skill	8
5.61	1.60	8.15	0.92	4.90	Degree	Apchuk Dolio Chucky		9

						(Apchuk Dolio) Chagy)		
7.01	1.34	8.45	0.61	5.84	Degree	Naryuchaki (Nairyu Chaji)		10
5.62	1.32	8.45	0.81	5.20	Degree	Horyochaki (Horyeo Kgaji)		11

The tabular value of (v) at the significance level of (0.05) = 2.10

It is clear from Table (5) that there is a substantial significant difference between the two distinct and non-distinct groups, in favor of the distinguished group, where the value of (T) ranged between (3.70: 8.76) and it is a function at the level of (0.05), which confirms the truthfulness of the tests in what they were developed for that they can differentiate between players at the same age stage.

The stability coefficient for physical and skill variables, by applying and reapplying the test, was found, as shown in Table (6).

Table (6)

Stability coefficient of the tests under study

N = 10

Correlation coefficient	Second Application		First Application		Unit of Measurement	Testing	Variables	m
	Deviation	Medium	Deviation	Medium				
0.88	0.30	3.12	0.34	3.20	m/s	Speed (3) right hoppers	Physical	1
0.91	0.35	3.12	0.31	3.16	m/s	Speed (3) Left Partridges		2
0.90	3.31	29.65	3.56	30.20	Poison	Vertical Jump		3
0.86	21.30	149.50	23.67	142.75	Poison	Wide jump		4
0.92	7.40	60.15	6.05	61.15	W	Original and sub-trends		5
0.90	0.35	1.91	0.32	1.98	W	Motor balance		6
0.88	3.97	- 2.20	3.52	- 3.00	Poison	Bending the torso from standing		7
0.80	0.37	5.27	0.28	5.16	Degree	Dolyuchaki (Dolio Shagi)	Skill	8
0.92	0.87	5.02	0.93	4.90	Degree	Apchuk Dolio Chucky (Apchuk Dolio) Chagy)		9
0.97	0.60	5.87	0.61	5.85	Degree	Naryuchaki (Nairyu Chaji)		10
0.92	0.80	5.10	0.82	5.20	Degree	Horyochaki (Horyeo Kgaji)		11

The tabular value (t) at the significance level of (0.05) = 0.63

It is clear from Table (6) that there is a statistically significant correlation between each of the scores of the research sample in the first and second application of physical and skill variables,

as the calculated values of (t) exceeded its tabular value at a significant level of (0.05), which means that the scores of the physical and skill tests under study are stable when they are reapplied under the same conditions.

2-10 Defining the Foundations of Program Development:

After reviewing the specialized scientific references and previous studies, the researcher was able to lay the foundations of the training program, which are as follows:

- The program should achieve the goals for which it was set.
- Supplement the program for the age group under study.
- Taking into account the gradual improvement of the level of pregnancy through the orderly change of its components.
- Consider the focus on diversity and transition from static strength training and isometric muscular work to mobility and muscular work (isotony) exercises, with the use of gradual resistances and for all angles and directions of muscles working in motor performance.
- Determine and divide program periods and load severity according to the age stage under study.
- Consider the use of the undulating method, which means the succession of rise and fall with the training load .

2.11 Planning and Implementation of the Training Program:

2-11-1 Training Program Planning:

The training program includes a set of collision training to develop physical and skill variables, where the researcher developed an expert opinion poll form in order to determine the appropriate collision training for the age stage under study, where the researcher agreed with (80%) of the experts ' opinions.

The stages of the program, which were included in the training stages, were identified for the experimental group, while for the control group, they underwent the usual training program, as shown in Table (7).

Training days for the experimental and control research groups.

Table (7)

Training days for the experimental and control groups

Control Group	Experimental Group
Sunday – Monday – Wednesday – Friday	Saturday - Tuesday - Thursday - Friday

- The content of the training program has been determined as in Table (8)

Table (8)

Training Program Content

Content	Variables
(12) Week	Program Duration
(4) Training Modules	Number of training units in a week

(48) Training Units	Number of training units during the program
Medium – High – Maximum	Training Loads
Low-intensity interval training	Training methods used

- The program period has been determined, which is the pre-competition period.
- The training program is divided into three phases.

2.12 Tribal Measurement:

The researcher applied the pre-measurements of the experimental and control groups in the variables under study during the time period from Sunday (7/4/2019) to Wednesday (10/4/2019).

2.13 Implementation of the training programme:

The training program in the experimental group and the program for the control group started for a period of (12) weeks, from Thursday (11/4/2019) to Tuesday (16/7/2019) with (4) training units per week, taking into account the same time of implementation of the training program on the experimental research group and the control group under the supervision of the researcher on the control group, and the stages of the program were determined as follows:

Table (9)

Stages of the training program for the experimental group

Third Stage	Phase II	Phase I	Comparison
Pre-competition preparation	**Special Issues**	**General Issues**	**Naming**
(4) Weeks	**(5) weeks**	**(3) Weeks**	**Duration**
It aims to maintain the acquired levels of physical abilities and skill performance	**Using Impact Training to Develop Physical and Skill Variables**	**Raising the level of career possibilities for players**	**Objective**

Through the exploratory study of the basic sample, the training load was rationed as follows:

The training unit time was limited to the week with the (average load) between (70-90 minutes), the week with the high load by (90-115 minutes), and the week with the maximum load by (110-130 minutes), provided that the intervals between the breaks are large, which leads to an increase in the time of the training unit.

The load scores were distributed over the training weeks during the training program stages, provided that the average load score was between (55 - 74%), the high load was between (75 - 84%) and the maximum load was between (85: up to the limit of the player's ability is 100%).

2.14 Proposed programme:

Table (7) shows the relative distribution of the training time of general and special physical preparation, skill preparation and planning in terms of percentages and minutes during the weeks and stages of the training program, and Table (8) shows the proposed training program.

15.2 Telemetry:

The telemetry was carried out on Saturday (13/7/2019) and it was taken into account that all measurements were made as was done in the tribal measurement.

2.16 Statistical Treatments:

The researcher performed statistical treatments through the .Minitape. Excel. SPSS

Chapter Three:

3.1 Presentation and discussion of the results:

3.1.1 Presentation and discussion of the results of the first hypothesis :

There are significant differences between the pre- and post-measurements of the experimental group in the effect of collision training and its impact on the accuracy and speed of offensive skills in the sport of taekwondo for the junior category in favor of telemetry.

Table (10)

The significance of the differences between the mean of the post-tribalistic measurements of the experimental group

In Physical and Skill Variables

N = 10

Value (v)	Teams	Go away		Before me		Unit of Measurement	Testing	Variables	m
		Deviation	Medium	Deviation	Medium				
5.90	1.08	0.38	4.92	0.50	3.86	m/s	Speed (3) right hoppers	Physical	1
4.51	1.04	0.50	4.81	0.42	3.77	m/s	Speed (3) Left Partridges		2
13.02	8.69	1.80	42.20	1.50	33.40	Poison	Vertical Jump		3
10.15	52.60	17.20	228.80	16.14	176.15	Poison	Wide jump		4
10.66	12.70	2.60	43.15	3.60	56.00	W	Original and sub-trends		5
5.91	1.90	0.78	4.15	0.43	2.28	W	Motor balance		6
8.30	9.10	2.47	7.01	4.09	- 2.10	Poison	Bending the torso from standing		7
10.46	2.62	0.61	8.70	0.70	6.12	Degree	Dolyuchaki (Dolio Shagi)	Skill	8
8.65	1.95	0.61	8.20	0.67	6.20	Degree	Apchuk Dolio Chucky (Apchuk Dolio) Chagy)		9
7.04	2.52	0.82	8.35	0.61	5.84	Degree	Naryuchaki (Nairyu Chaji)		10
13.07	2.04	0.41	8.20	0.62	6.15	Degree	Horyochaki (Horyeo Kgaji)		11

The tabular value of (v) at the significance level of (0.05) = 2.26

It is clear from Table (10) that there is a difference in the statistical function at the level of (0.05) between the pre- and post-measurements of the experimental group in favor of the dimensional measurement in the variables of physical abilities, where the calculated value of (T) was limited between (4.51 and 13.02).

While it is clear that there are significant differences in statistics between the pre- and post-tests of the experimental group, it is clear that the measurement was successful. The dimensional in the variables of the skill performance level where the calculated value of (T) was limited between (7.04 and 13.07).

The researcher attributes these significant differences between the pre- and post-tests of the experimental group in the variables of physical abilities and the level of skill performance of the players, due to the nature of the use of collision training, which is characterized by its strength and speed in the implementation of performance, and this is in line with the performance requirements for the combat players (corgi) in taekwondo, which led to the development of the level of skill performance.

The researcher also attributes these results to the proper codification of the program, the selection of trainings similar to the skill performance of the skills under study, and the determination of the appropriate training method to achieve the goal of the proposed training program , which worked to integrate the special physical abilities and develop the level of skill performance of the players under study.

It is clear from the nature of the performance of impact training from standing to squat and from stretching to shortening, and the multiplicity and variety of performance conditions led to the development of agility, and that exploiting the weight of the body against gravity while keeping the center of transport of the body within the base of the pillar when performing impact exercises led to the development of balance, and that the peculiarity of ultra-fast performance in the transition between stretching and shortening during the time of performance and repetitions led to the development of kinetic speed, which led to an increase in the effectiveness of the use of force through muscular skill Nervousness for movement and development of the skill level of the players.

Thus, the validity of the first hypothesis, which states that there are statistically significant differences between the pre- and post-measurements of the experimental group in the effect of collision training and its impact on the accuracy and speed of offensive skills in the sport of taekwondol in the youth category and in favor of telemetry, is verified.

Presentation and discussion of the results of the second hypothesis:

There are statistically significant differences between the pre- and post-measurements of the control group in the effect of collision training and its impact on the accuracy and speed of offensive skills in the sport of taekwondol in the youth category and in favor of telemetry.

Table (11)

The Significance of the Differences between the Mean Tribal Dimensional Measurements of the Control Group

In physical and skill variables, **n = 10**

		Go away	**Before me**				

Value (v)	Teams	Deviation	Medium	Deviation	Medium	Unit of Measurement	Testing	Variables	m
2.23	0.40	0.38	4.38	0.43	4.00	m/s	Speed (3) right hoppers	Physical	1
3.48	0.65	0.24	4.34	0.43	3.66	m/s	Speed (3) Left Partridges		2
2.71	2.00	2.05	36.20	1.48	34.20	Poison	Vertical Jump		3
2.58	33.20	47.44	203.20	14.25	169.80	Poison	Wide jump		4
2.53	2.20	3.58	55.60	5.62	53.30	W	Original and sub-trends		5
2.80	0.30	0.23	2.80	0.30	2.50	W	Motor balance		6
2.51	3.15	0.51	1.38	4.35	- 1.80	Poison	Bending the torso from standing		7
2.90	0.16	0.41	6.61	0.46	6.45	Degree	Dolyucha ki (Dolio Shagi)	Skill	8
2.27	0.55	0.75	6.23	0.70	5.65	Degree	Apchuk Dolio Chucky (Apchuk Dolio) Chagy)		9
4.07	0.79	0.82	6.20	0.46	5.50	Degree	Naryucha ki (Nairyu Chaji)		10
2.58	0.21	0.51	6.36	0.62	6.15	Degree	Horyocha ki (Horyeo Kgaji)		11

The probability value associated with the t-test at the significance level of (0.05) = 2.26

It is clear from Table (11) that there is a statistically significant difference at the level of (0.05) between the pre- and post-measurements of the control group in favor of the dimensional measurement in the variables of physical abilities, where the calculated value of (T) was limited between (2.23 and 2.80).

While it is clear that there are differences in the statistical function between the pre- and post-measurements of the control group in favor of the dimensional measurement in the variables of the skill performance level, where the calculated value of (T) was limited between (2.27, 4.07).

The researcher believes that these large differences in physical abilities and performance levels between the pre- and post-tests of the control group are attributed to the positive effect of the training program. Continuous training, the scientific method in training, and the organization of

the amount of training in proportion to the player's skills are all factors that have contributed to the development of the physical and mental abilities of the players.

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Regular training also works on the development of internal devices through the effect of the physical exercises performed by the athlete during the training units , which constitute a basic and important factor in the required adaptation process, and that the more variety in the formation of training doses with different physical elements, the more it has a positive impact on the development of the physical condition of the players and the development of their skill level, because the skill performance requires the extent to which the players possess the physical elements of the practicing sports activity.

Hence, the second hypothesis is proven to be correct: there are statistically significant differences in the results of the pre- and post-test of the control group. The effect of collision training and its impact on the accuracy and speed of offensive skills in the sport of taekwondo for the youth group and in favor of telemetry.

Presentation and discussion of the results of the third hypothesis:

There are statistically significant differences between the dimensional measurement of the two groups in the effect of collision training and its impact on the accuracy and speed of offensive skills in the sport of taekwondo for the youth group and in favor of the experimental group.

Table (12)

The significance of the differences between the dimensional measurement averages of the experimental and control groups in physical and skill variables **N1 = N2 = 10**

Value (v)	Teams	Control Group		Experimental Group		Unit of Measurement	Testing	Variables	m
		Deviation	Medium	Deviation	Medium				
3.34	0.57	0.38	4.37	0.37	4.96	m/s	Speed (3) right hoppers	Physical	1
2.60	0.48	0.23	4.30	0.50	4.82	m/s	Speed (3) Left Partridges		2
6.70	5.85	2.05	36.25	1.80	42.15	Poison	Vertical Jump		3
2.60	25.60	47.48	203.15	17.20	228.80	Poison	Wide jump		4
8.80	12.40	3.57	55.60	2.61	43.15	W	Original and sub-trends		5
5.15	1.34	0.23	2.82	0.78	4.15	W	Motor balance		6
6.90	5.55	0.51	1.38	2.48	7.00	Poison	Bending the torso from standing		7
9.15	2.46	0.57	6.30	0.61	8.70	Degree	Dolyuchaki (Dolio Shagi)	Skill	8
6.21	1.95	0.76	6.23	0.61	8.15	Degree	Apchuk Dolio Chucky (Apchuk Dolio) Chagy)		9
5.61	2.10	0.80	6.25	0.82	8.35	Degree	Naryuchaki (Nairyu Chaji)		10
8.70	1.81	0.51	6.35	0.42	8.25	Degree	Horyochaki (Horyeo Kgaji)		11

The p-value associated with the t-test is 2.10, which is statistically significant at the level of (0.05) = 2.10.

It is clear from Table (12) that there are statistically significant discrepancies at the level of (0.05) between the telemetry of the experimental and control groups in favor of the dimensional

measurement of the experimental group in the variables of physical abilities, where the value of (T) was limited between (2.60 : 8.80), while it is clear that there are statistically significant differences between the dimensional measurement of the experimental and control groups in favor of the dimensional measurement of the experimental group in the variables of the skill performance level, where the calculated value of (T) was limited between (5.61 : 9.15)

The researcher attributes these statistically significant differences between the dimensional measurement of the experimental and control groups, in some variables of physical abilities and the level of skill performance under study, to the use of collision training, which has a positive effect of physical variables on the physical elements of muscular ability, such as strength, muscular ability, speed of performance, accuracy and agility, which develops consistency between the stages of performance, which has a positive effect on the physical level of the players. The researcher also attributes these results to what he pointed out (Abul-Ela Ahmed Abdel Fattah, 2003): that impact training is those exercises through which the muscle is able to reach the maximum production of force in the shortest possible time through the integration between strength and speed training, and it uses the force of gravity to store energy in the muscles, where the muscles are suddenly loaded with it and forced to stretch before the motor contraction occurs, and it also has an effect. on developing the level of skill performance to a great extent.

Hence, the third hypothesis is proven to be correct , which is that there are statistically significant differences between the dimensional measurement of the experimental and control groups in the effect of collision training and its impact on the accuracy and speed of offensive skills in the sport of taekwondo for the youth group and in favor of the experimental group.

Chapter Four:

4.1 Conclusions:

Within the scope of the objectives and assumptions of the research, and based on the results of the research, the following conclusions were reached:

1- The results showed that collision training is an effective method in developing the accuracy and speed of offensive skills in young taekwondo players.

2- Collision training contributed to the development of the ability to adapt to psychological and physical pressures during competitions, which reflected positively on technical performance.

3- Collision drills had a clear role in increasing the speed of reaction and achieving a balance between strength and accuracy while carrying out attacks .

4- The nature of the confrontational training led to the development of self-confidence and increased their level of concentration while performing the movements under the pressure of simulating real matches.

5- Improvements in performance were particularly noticeable in skills such as (forward kicks, rotations,

and jumping), which require high endurance and muscular explosiveness.

4.2 Recommendations:

In light of the research results and the conclusions reached, the researcher recommends the following:

1- The need to include collision training in the regular training plans for taekwondo players for the youth category.

Because of its positive impact on the development of offensive skills.

2- Grading the intensity and intensity of the collision training according to the fitness and skill level of each player to avoid injuries
and ensure maximum utilization.

3- Educate trainers about the importance of these trainings and how to apply them correctly and safely through training courses
Specialist.

5- Conducting future studies to measure the impact of impact training on other aspects such as general endurance or
Defensive skills.

6- Designing integrated training programs that combine collision training with technical and retrospective training to achieve balance in performance.

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