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The Use of TRX Resistance Ropes Exercises to Improve the Strength and Speed of Some Kicks and Its Effect on the Level of Physical and Skill Performance of in Karate

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Abstract: The research aims to improve the physical and skill level of kumite players in karate by designing a training program using resistance rope exercises (TRX) to improve the characteristic strength of speed for some kicks in question for kumite beginners in the sport of karate. The researcher used the experimental approach, and the research community included 10 youngsters for the experimental group, 10 youngsters for the control group, and 14 youngsters for exploratory studies stage (13-14) years from the 23 July Sports Club. Through statistical treatments, the researcher came up with designing a training program using resistance rope exercises (TRX) to improve the strength and speed characteristic of some kicks under investigation and to know their effects on the physical and skillful performance of kumite juniors, and the proposed training program applied to the experimental group led to a high improvement in physical and skill tests for the young Kumite in the sport of karate. The researcher recommends paying attention to designing training programs using resistance rope exercises (TRX) and knowing their effects on the physical and skill performance of some kicks for kumite beginners in karate, as well as conducting more research related to resistance ropes training (TRX) on other samples of karate players and players.

Keywords: TRX Resistance Ropes, Strength and Speed of Some Kicks, Skill Performance

1. Introduction and Search Problem

The great development of sports stadiums and the achievement of numbers and achievements in various types of sports comes only through the integration of preparation for physical, mahariyah, psychological and functional aspects, the proper application of scientific foundations and the participation of different sciences side by side to contribute to this development in support of the training process. [7]

Science is also developing spectacularly in various fields of sports, taking into account the results of scientific research, which is the only basis for reaching the high levels of sports and mutations in the sporting achievements that we see at the Olympic and international games the best evidence to indicate this, and it has become necessary to use all scientific methods with its various branches and apply them to the Egyptian sports community so that we can reach the highest levels in international forums. [6]

Ahmed Ibrahim states that karate is a competitive self-defense sport characterized by changing and diverse playing positions consisting of the use of offensive and defensive skills in addition to foot movements, all of which are one-off positions dominated by moving work and rapid performance, which requires a high ability of the athlete to accurately choose the various actions directed through motor compatibility, speed, agility and the ability to have a high degree of special endurance, The performance style of karate is to focus strength at the right time and place. [1]

Sameh Al-Shabrawi explains that karate is one of the sports activities that have special requirements that distinguish it from other sports activities, and the availability of these requirements among its practitioners gives them a greater opportunity to absorb and master motor skills, which are one of the pillars to reach the higher levels. [5]

Issam Saqr points out that the actual fight competition (Comite) consists of changing positions requiring the special abilities of its practitioners to perform the requirements of the game, and that the availability of these special capabilities among the players of the comiti is of great importance in all offensive and defensive skills under the conditions and conditions of competition The availability of these special abilities is also necessary in the success of the players of the comiti as it helps to save energy and reduce injury and enables the player to perform and shoot punches and kicks in an effective and effective way in the areas authorized to shoot during the game in the body in accordance with the law of the International Karate Federation to get the highest number of points and win the game. [9]

Mohamed Said points out that the Comiti competition is one of the main karate competitions that requires the player to have many physical, skill, planning, mental and psychological abilities that are commensurate with the nature of the competition process in the comiti, due to the variety of motor skills between offensive skills (simple - composite) and defensive skills, which are performed through movements in different directions and which the player tries to master and learn the requirements of its performance during the games in order to get the largest number of points to win the game. [12]

Colin Bit Kollen Bet states that the actual fight "Comet" is the optimal use of the player's abilities and capabilities against his opponent either by defense or attack during the time of the game specified and within the framework of the internationally agreed karate law to achieve the best level of achievement. [11]

Lindagriffin, Stephen Mitcell and Jodis Oslin (1979) agree that skill preparation is the basis for planning and the main objective of planning is to improve the skill performance of the player by taking advantage of his skill abilities properly. [21]

Okazaki and Astrivic & Okozaki (1984) state that all movements performed in karate require special capabilities, that these abilities must be developed in the early stages of training for the builder and that the more these capabilities are developed, the more this helps to increase the possibility of motor and skilled performance. [23]

Nakayama (1986) and Dan Bradley (1988) agree that the karate player's impressive motor performance depends mainly on his particular physical qualities such as strength, speed and endurance. [22, 20]

TRX is a new form of exercise known as suspension exercises, based primarily on body weight for rapid muscle gain by focusing on physical exertion without equipment, and has begun with a military character through the U.S. Navy and has subsequently spread around the world. TRX integrates the three essential elements of fitness, namely, cardio exercises, flexibility and strength simultaneously and more effectively, It builds your actual strength, improves your flexibility, increases your balance, and these great exercises can burn 300-500 calories during a single exercise. [4]

Through the experience of the researcher in karate, the results of the competitions for the study sample have been viewed and tracked in recent years and it has been shown that the level of physical performance and mahari has not been effectively developed and the stability of their level is close, and the researcher's observation that the organizers of the training process and physical preparation of that age stage do not constantly use tools and devices within their training programs The researcher also reviewed the study of Maryam Mustafa [16], the study (Mahmoud Al-Maghawari) [12], the study (Abdulaziz Jassim) [8], the study (Nesma Faraj) [18], the study (Emad al-Din Shaaban) [10], and the study (Hamdi Saleh) [3], study (Mahmoud Mohammed) [14], study (Mahmoud Mukhtar) [15], study (Mustafa Ismail) [17], study (a. Mr.) [2], study (Norah Misbah) [19], study Rashid Abu Al-Hajjaj [4] Their results showed the importance of using tools within the training program that help in the development of the physical level and therefore the skill level, so the researcher in this study will design a program that includes physical training using the rope resistance (TRX) to develop physical performance variables because of their great importance and impact on the skill level of emerging players at that age of the players of the community in karate.

Search goal:

The research aims to improve the physical and skill level of the karate players by:

Design a training program using resistance rope training (TRX) to improve the speed-distinguishing power of some kicks for karate builders.

Search assignments:

1. There are statistical function assignments between the average tribal and remote measurement of the control group in improving the physical and mahari level under consideration for karate players in favour of distance measurement.
2. There are statistical function assignments between the average tribal and remote measurement of the experimental group in improving the physical and hari level under consideration for karate players in favour of distance measurement.
3. There are statistically significant assumptions between the control group and the experimental group in the physical and laboratory distance measurement under consideration for karate players in favour of the experimental group.

Search procedures:

Research approach:

The researcher used the experimental method to suit the nature of the research using the two equal groups, the experimental first group and the second group controlled by the tribal and remote measurements.

Search sample:

A total of 10 young men were selected for the trial group, 10 for the control group and 14 for the 13-14 year-old reconnaissance studies stage from the July 23Rd Sports Club.

Data collection tools:

1. Restamir to measure the total length of the body for the nearest (cm).
2. Medical balance to measure weight for the nearest (kg).
3. Stop hour to measure time.
4. Measuring tape.
5. Rope resistance (TRX).

Table 1. *Statistical characterization of flattening and twisting transactions of experimental group data and control group in basic primary variables and physical and maharia variables prior to trial N=20.*

Variables	Unit of measurement	Average	mediator	Standard deviation	Flattening	Twisting plants
Growth semantics rates						
Age	y	13.46	13.5	0.52	0.01	-0.53
Length	cm	162.8	163	2.75	-0.65	-0.27
Weight	kg	60.2	60	2.49	-0.41	0.34
Training age	y	3.1	3	0.27	-0.35	0.54
Physical tests						
Vertical jump	cm	36.95	37	0.88	-0.722	-0.42
Horizon Jump	m	1.77	1.77	0.02	0.961	-1.004
Skill tests						
Kizami mawashi gery left	n	0.83	1	0.452	-0.92	0.339
Kizami mawashi gery right	n	0.747	0.33	0.516	-0.952	0.748
Kizami oura mawashi gery left	n	1.16	1	0.423	-0.399	-0.273
Kizami oura mawashi gery right	n	0.86	1	0.365	-0.184	0.103

Table 1 of statistical characterization of experimental group, control group and research group data on basic, physical and maharian primary variables prior to trial shows that these data are homogeneous, moderate and natural distribution, as the value of flatness factors is limited to ±1, and it is clear that the value of the twisting factor ranges from ±3, confirming the homogeneity of sample data in these variables and the absence of distraction in these data and the absence of distribution defects by the sample community prior to the performance of the experiment.

Table 2. *Equality of the experimental and controlled groups in the variables under consideration N=20.*

Variables	Experimental Group		Control Group		The difference between averages	T Test
	A	S	A	S		
Growth semantics rates						
Age	13.49	0.59	13.43	0.48	0.06	0.25
Length	163.7	2.63	161.9	2.69	1.8	1.51
Weight	60.8	2.53	59.6	2.01	1.2	1.11
Training age	3.1	0.24	2.9	0.18	0.18	1.8
Physical tests						
Vertical jump	37.28	0.757	36.63	0.92	0.645	1.791
Horizon Jump	1.76	0.03	1.77	0.027	0.001-	0.148
Skill tests						
Kizami mawashi gery left	0.864	0.525	0.797	0.392	0.067	0.323
Kizami mawashi gery right	0.73	0.561	0.764	0.498	-0.034	0.143
Kizami oura mawashi gery left	1.13	0.524	1.19	0.318	-0.068	0.351
Kizami oura mawashi gery right	0.998	0.415	0.73	0.264	0.268	1.72

Value at 0.05 = 2.101.

Table 2 of differences between the experimental group and the control group in the primary, physical and maharian variables prior to the experiment shows that there were no moral differences between the experimental and controlling groups, where the value was between (0.143 to 1.791) and this value is less than the scheduling value at 0.05, which confirms the parity of the two groups in these variables before the experiment.

2. Surveys

The first survey:

From Wednesday, September 16, 2020 to Saturday, September 19, 2020, 14 young people from the July 23 Sports Club, not from the basic research sample, were based on the purpose of ensuring the validity of the tools and devices used in the research, locating tests and measurements, training assistants and identifying the difficulties that the researcher may face during the application.

Second survey:

This survey was conducted from Tuesday, September 22, 2020 to Friday, September 25, 2020 with the aim of finding scientific transactions:

1. Finding the honesty factors for complex mental and laboratory tests in question.
2. Finding the stability factor for complex mental and laboratory tests under consideration.

Scientific transactions: -

Validity test is true:

Table 3. *Believe the tests used in question N=14.*

Variables	Distinctive collection		The unmarked collection		The difference between averages	T Test
	A	S	A	S		
Vertical jump	44.66	1	29.2	1.56	15.44	24.9
Horizon Jump	2.08	0.097	1.34	0.039	0.73	21.1

T value at 0.05 = 2.179.

Table 3 shows that there are statistically significant differences between the distinct group and the non-featured group, where the value of (t) differences ranged from (21.1) as the smallest value, (24.9) as the largest value and this shows that the tests have distinguished between the privileged and the non-distinctive, which means the sincerity of the tests.

Table 4. *Stability of tests used in question N=14.*

Variables	Tribal		Telemetry		Correlation coefficient
	A	S	A	S	
Vertical jump	44.66	1	44.88	0.927	0.898
Horizon Jump	2.08	0.097	2.09	0.091	0.94

T value at 0.05 = 0.707.

Table 4 shows that there are statistically significant differences between the first and second applications, with the value of (r) ranging from (0.898) as the smallest value, (0.940) as the largest value, indicating the stability of the tests.

Tribal measurements:

Tribal measurements of the control and experimental groups were made to obtain measurements of all variables under consideration from 27 September 2020 to 28/10/2020 at the July 23 Sports Club.

Proposed training program:

The researcher prepared the proposed training program according to scientific foundations and through access to some specialized scientific references and related studies such as the study (Maryam Mustafa 2015), the study (Mahmoud Al-Maghawari 2016), the study (Abdulaziz Jassim 2017) and the study (N His name is Faraj 2018, study (Emad al-Din Shaaban 2018), study (Hamdi Saleh 2019 AD), study (Mahmoud Mohammed 2019 AD), study (Mahmoud Mukhtar 2019 AD), The study (Mustafa Ismail 2019), the study (A. Al Sayed 2019), the study (Noura Misbah 2020 AD) and the study (Rashid Abu Al-Hajjaj 2020) the program was implemented as follows:

Table 5. *Time distribution of the proposed training programme.*

Statement	Time distribution
Duration of the program	12
Number of weekly training times	3
Number of units	36
Program time	2160m
Program time without warm-up and calming down	1620m
Warm-up time	360m
Cooling down time	180m

The foundations for the development of the training program:

1. Setting the overall objective of the proposed training program.
2. Taking into account the growth characteristics of the sunni phase in question.
3. Ensuring the safety and health of young people (research sample) by medical examination by the club doctor.
4. Taking into account the availability of security and safety factors during the application of training and tests.
5. Availability of measurement tools.
6. Take into account the choice of similar exercises so that the player earns the perfect shape.

Dimension measurements:

After the end of the program's time limit, the distance measurements of the pilot and officer groups were made from 24 December 2020 to 26 December 2020 at the July 23Rd Sports Club on the same path as tribal measurements.

Statistical treatments:

1. Arithmetic average.
2. Mediator.

Standard deviation.

1. Flattening.
2. Sprain.
3. Test T.
4. The rate of improvement.

Table 6. *The difference between the tribal and remote measurements of the control group in the search variables.*

Variables	Tribal		Telemetry		The difference between averages	T Test	%
	A	S	A	S			
Vertical jump	36.63	0.9244	38.27	0.786	1.63	4.84	4.4
Horizon Jump	1.77	0.027	1.8	0.024	0.03	4.22	1.69
Kizami mawashi gery left	0.797	0.392	1.43	0.315	-0.633	10.5	44.26
Kizami mawashi gery right	0.764	0.498	1.864	0.175	1.1	6.36	59
Kizami oura mawashi gery left	1.19	0.318	1.597	0.30761	-0.399	9.167	25
Kizami oura mawashi gery right	0.73	0.264	1.63	0.293	0.9	8.96	55.21

Value T at 0.05 = 2.262.

3. View Results

Table 6, which refers to the differences between tribal measurement and the remote measurement of the control group in the research tests, shows that there are morally significant differences between the tribal and distance measurements in all variables, with a value of between (4.22 to 10.50) and these values are greater than the scheduling value at 0.05 and the improvement rate was between (1.69% to 59%).

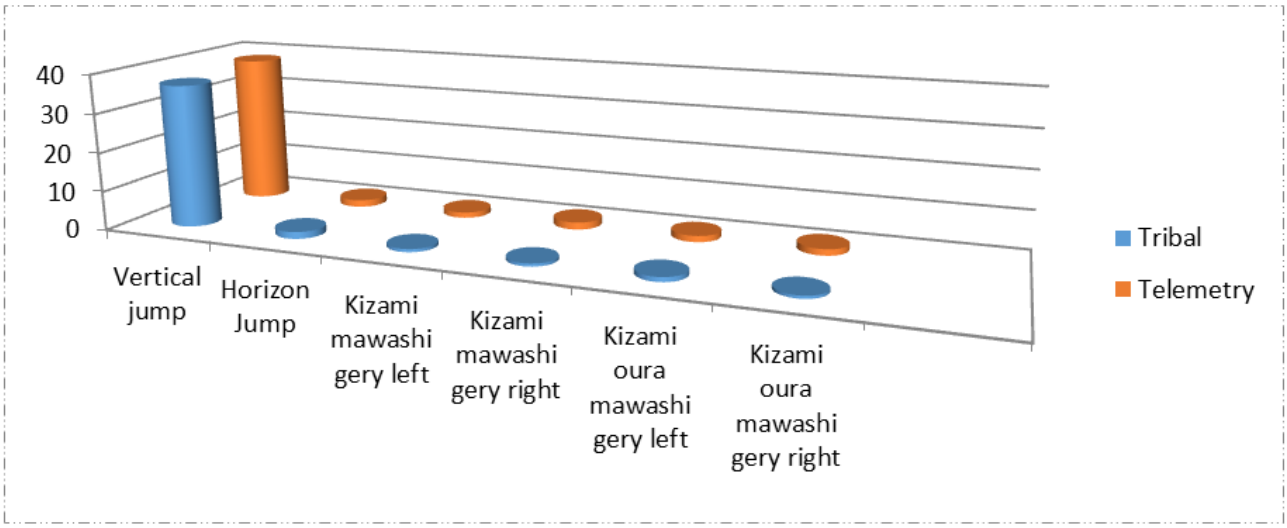

Figure 1. *The difference between the tribal and remote measurements of the control group in the search variables.*

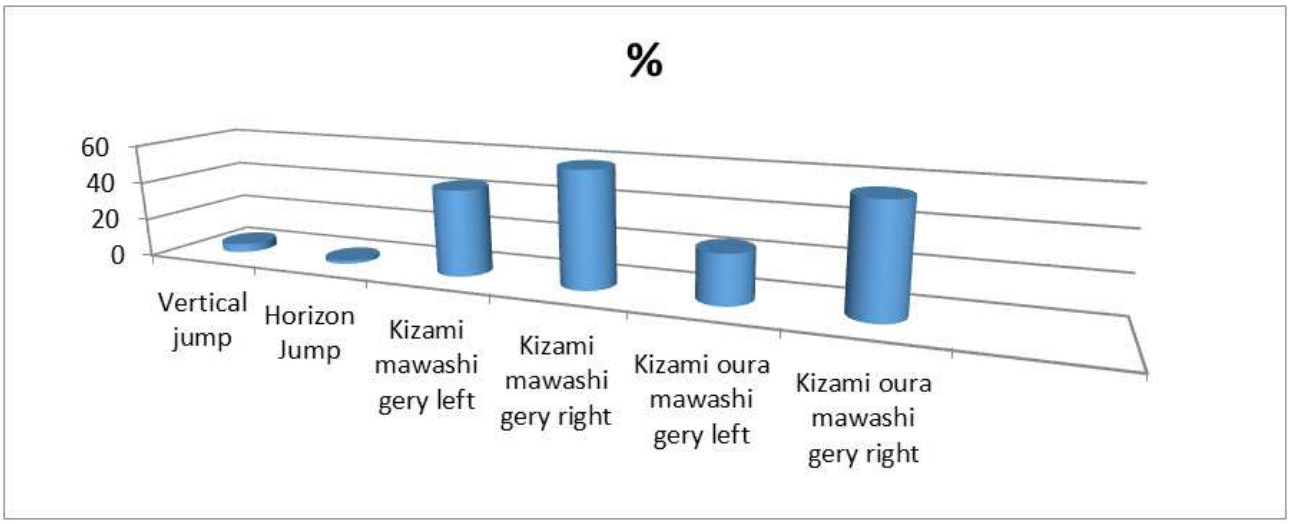

Figure 2. *The rate of improvement between the tribal and remote measurement of the control group in the search variables.*

Table 7. *The difference between the tribal and remote measurements of the experimental group in the search variables N=10.*

Variables	Tribal		Telemetry		The difference between averages	T Test	%
	A	S	A	S			A
Vertical jump	37.28	0.757	43.36	1.12	6.081	13.49	16.31
Horizon Jump	1.76	0.03	1.96	0.0163	0.195	18.97	11.07
Kizami mawashi gery left	0.864	0.525	2.09	0.386	1.232	5.54	58.77
Kizami mawashi gery right	0.73	0.561	2.26	0.26	1.534	7.07	67.75
Kizami oura mawashi gery left	1.13	0.524	2.53	0.612	1.401	6.19	55.35
Kizami oura mawashi gery right	0.998	0.415	2.26	0.26	1.266	8.62	55.91

Value T at 0.01 = 3.50.

Table 7, which refers to the differences between tribal measurement and the remote measurement of the experimental group in research tests, shows that there are morally significant differences between tribal and remote measurement in all variables, with a value of between (5.54 to 18.97) and these values are greater than the t-table value at 0.01 and the improvement rate was between (11.07% to 58.77%).

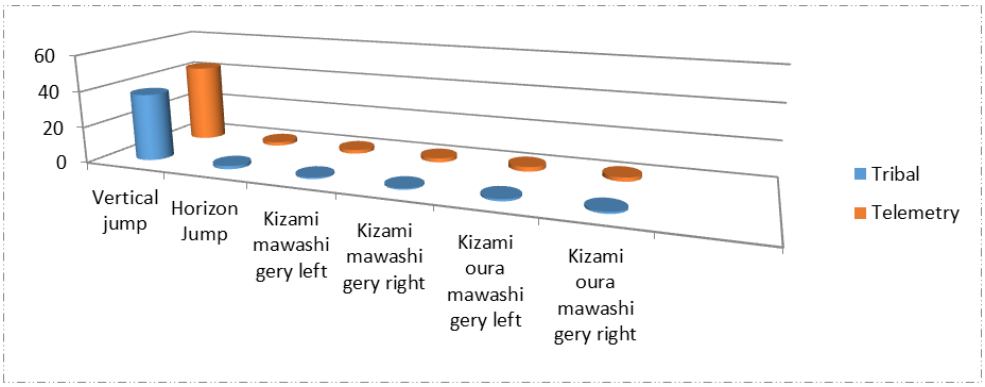

Figure 3. *The difference between tribal and remote measurement of the experimental group in search variables.*

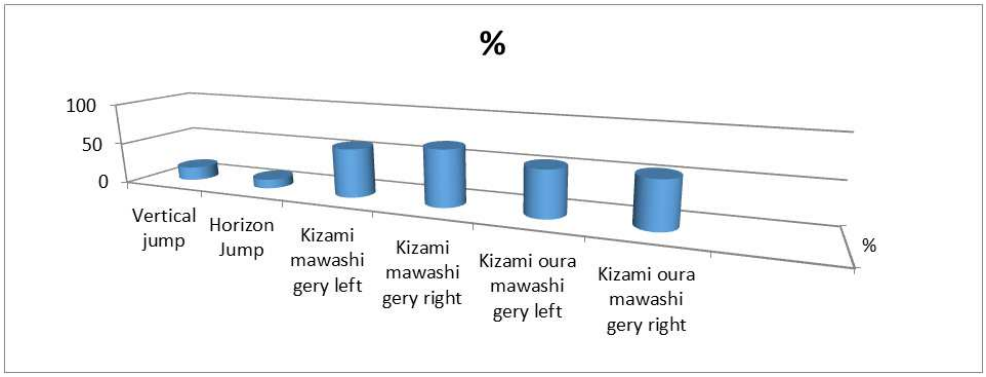

Figure 4. *Rate of improvement between tribal and remote measurement of the experimental group in search variables.*

Table 8. *The difference between the distance measurement of the control and experimental groups in the search variables N=10.*

Variables	Control Group		Experimental Group		The difference between averages	T Test	%
	A	S	A	S			A
Vertical jump	38.27	0.786	43.36	1.12	5.09	12.33	11.73
Horizon Jump	1.8	0.024	1.96	0.0163	0.162	18.15	8.26
Kizami mawashi gery left	1.43	0.315	2.09	0.386	0.666	4.224	31.86
Kizami mawashi gery right	1.864	0.175	2.26	0.26	0.4	4.029	17.69
Kizami oura mawashi gery left	1.59	0.307	2.53	0.612	0.934	4.308	36.91
Kizami oura mawashi gery right	1.63	0.293	2.26	0.26	0.634	5.114	28.05

Value T at 0.05 = 2.262.

Table 8, which refers to the differences between the two remote measurements of the control group and the experimental in the research tests, shows that there are morally significant differences between the two measurements in all variables for the experimental group, with a value of between (4.029 to 36.91) and these values are greater than the scheduling value at 0.05 and the improvement rate was between (8.26% to 36.91%).

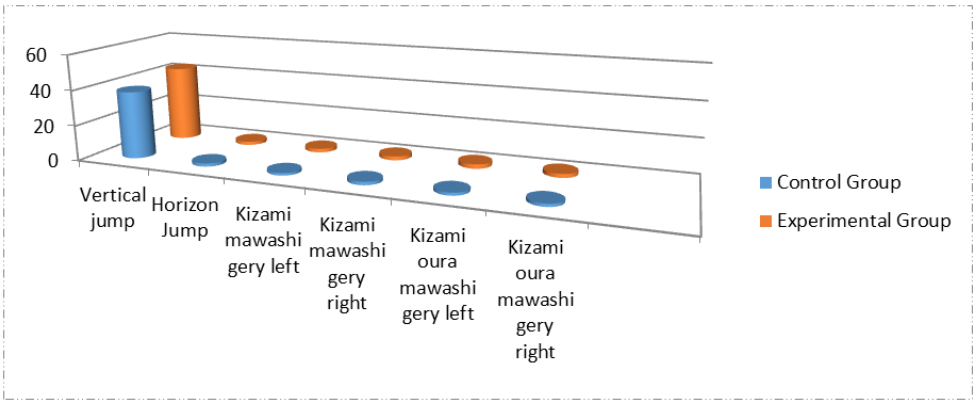

Figure 5. *The difference between the distance measurement of the control and experimental groups in the search variables.*

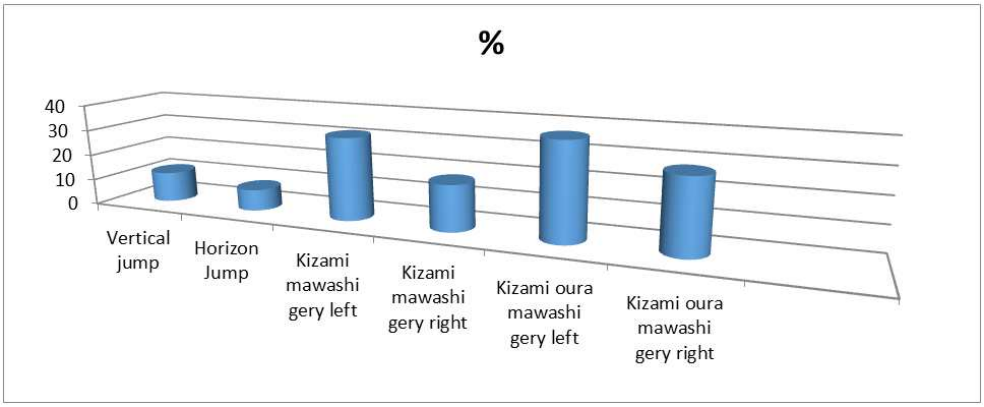

Figure 6. *Rate of improvement between the remote measurement of the control and experimental groups in the research variables.*

4. Discussion of Results

In light of the objectives and assumptions of the research and from the reality of the data and the results reached and through their statistical treatment, the researcher reached the discussion of the results and interpreted them as follows:

The first imposition, which states that "there are statistical function assumptions between the average tribal and remote measurement of the control group in improving the physical and maharie level under consideration for karate players in favor of distance measurement."

Table 6, Figure 1 and Figure 2 show statistically significant differences at a moral level of 0.05 between the tribal and remote measurements of the control group in favor of the distance measurement in the physical and skill tests in question, where the calculated value of (t) ranged In the vertical jump test (4.84), the value of (t) calculated in the horizontal jump test ranged (4.22), and the value of (t) calculated in the skill test ranged from the Kzami Mawashi Jerry Left) 10.5,(The value of (t) calculated in the skill test of Kazami Mawashi Jerry Yameen (6.36) also ranged from the value of (t) calculated in the skill test of Kazami Ora Mawashi Jerry Left (9.167), as well as ranged The value (t) calculated in the Kzami Ora Mawashi Jerry Yameen skill test (8.96), all of which are higher than the table value (t) at a moral level of 0.05, indicating statistically significant differences.

It is also clear that the average tribal measurement of the control group in the vertical jump test was (36.63) and the average distance measurement was (38.27), while the tribal measurement of the control group in the horizontal jump test was 1.77, while the average distance measurement was 1.77. (1.80), while the average tribal measurement of the control group in the Ksami Mawashi Jerry Left skill test was (0.797), the average distance measurement was (1.43), while the average tribal measurement of the control group in the Kzami skill test Jerry's right Mawashi reached) 0.764 (The average distance measurement was (1.864), while the average tribal measurement of the control group in the Kazami Ora Mawashi Jerry Left test was 1.19, the average distance measurement was (1.597), while the average tribal measurement of the control group in the Kazami Ora Mawashi jerry right test was (0.73) and the average distance measurement was (.63).

Table 6 also shows that the improvement rate in the vertical jump test was 4.4%, while the improvement rate in the horizontal jump test was 1.69%, while the improvement rate in the Kzami Mawashi Jerry Left skill test was 44.69%) 26%), while the improvement rate in the skill test of Kazami Mawashi Jerry Right (59%), while the rate of improvement in the skill test of Kazami Ora Mawashi Jerry Left was (25%), while the rate of improvement in the skill test of Kazami Ora Mawashi Jerry Right (55.21%).

The differences in averages between tribal measurement and the remote measurement of the control group in the tests in question are also evident, with the value of differences in the vertical jump test (1.63), while the differences in the horizontal jump test (0.03), while the differences in the Kzami skill test were 0.03. Jerry Left Mawashi (0.633), while the differences in the Kzami Mawashi Jerry Yameen skill test (1.10), while the differences in the Ura Kazami Mawashi Jerry Left skill test (0.399), The differences in the Ora Mawashi Jerry Yameen skill test.(0.9)

The researcher explains that the improvement of the control group in the physical and skills tests under consideration is due to the continuation of the training program (traditional) followed, as any traditional program must improve the level of performance, but the amount of improvement is the difference between the amount of the program and the other.

This is consistent with the study (Maryam Mustafa) [16], the study (Mahmoud Al-Maghawari) [12], the study (Abdulaziz Jassim) [8], the study (Nesma Faraj) [18], the study (Emad al-Din Shaaban) [10], and the study (Hamdi Saleh) [3], study (Mahmoud Mohammed) [14], study (Mahmoud Mukhtar) [15], study (Mustafa Ismail) [17], study (A. S.) [2], study (Norah Misbah) [19] and study (Rashid Abu Al-Hajjaj) [4].

Discussion of the second imposition, which states that "there are statistical function assumptions between the average tribal and remote measurement of the experimental group in improving the physical level and the researched hari for the players of the community in karate in favor of distance measurement".

Table 7, Figure 3 and Figure 4 show statistically significant differences at a moral level of 0.05 between the tribal and remote measurements of the experimental group in favor of the distance measurement in the physical and skill tests under consideration where the value of (t) calculated in Vertical jump test (13.49), as the value of (t) calculated in the horizontal jump test ranged (18.97), and the value of (t) calculated in the skill test ranged from the Kzami Mawashi Jerry Left (5.54), The value of (t) calculated in the skill test ranged from the right-hand Mawashi (7.07), and the value of (t) calculated in the Kzami Ora Mawashi Jerry Left skill test (6.19) ranged from The value (t) calculated in the Kzami Ora Mawashi Jerry Yameen skill test (8.62), all of which are higher than the table value (t) at a moral level of 0.05, indicating statistically significant differences.

It is also clear that the average tribal measurement of the experimental group in the vertical jump test was 37.28, the average distance measurement was (43.36), while the tribal measurement of the control group in the horizontal jump test was 1.76. The average distance measurement was 1.96, while the average tribal measurement of the control group in the Ksami Mawashi Jerry Left skill test was 0.864, while the average distance measurement was (2.09), The average tribal measurement of the control group in the Kzami Mawashi Jerry Right skill test was 0.730, the average distance measurement was (2.26), while the average tribal measurement of the control group in the Kazami Ora Mawashi Jerry Left test was 1.26. 13) The average distance measurement was (2.53), while the average tribal measurement of the control group in the Kzami Ora Mawashi jerry right skill test was (0.998) and the average distance measurement was (2.26).

Table 7 also shows that the improvement rate in the vertical jump test was 16.31%, while the improvement rate in the horizontal jump test was 11.07%, while the improvement in the Kzami Mawashi Jerry Left skill test was 58.77%) While the improvement rate in the Ksami Mawashi Jerry Right skill test was 67.75%, while the improvement rate in the Kzami Ora Mawashi Jerry Left skill test was 55.35%, while the improvement rate in the Kzami Ora Mawashi Jerry skill test was 55.35%). Right (55.91%).

The differences in averages between tribal and experimental group distance measurements are also evident in the tests under consideration, with the value of differences in the vertical jump test (6,081), while the differences in the horizontal jump test (0.195), while the differences in the Kzami skill test were 0.195. Jerry Left Mawashi (1.232), while the differences in the Ksami Mawashi Jerry Right Skill Test (1.534), while the differences in the Ora Kazami Mawashi Jerry Left Skill Test (1.401), The differences in the Ora Mawashi. Jerry Yameen skill test were 1,266.

The researcher attributes the marked improvement in the physical level and skills under research in the experimental group to the use of the proposed training program in which he used resistance rope training (TRX), which led to a high level of physical performance of the players of the comiti as well as the skill level under consideration in the karate community players.

This is consistent with the study (Maryam Mustafa) [16], the study (Mahmoud Al-Maghawari) [12], the study (Abdulaziz Jassim) [8], the study (Nesma Faraj) [18], the study (Emad al-Din Shaaban) [10], and the study (Hamdi Saleh) [3], study (Mahmoud Mohammed) [14], study (Mahmoud Mukhtar) [15], study (Mustafa Ismail) [17], study (A. S.) [2], study (Norah Misbah) [19] and study (Rashid Abu Al-Hajjaj) [4].

Discussion of the third imposition, which states that "there are statistically significant assumptions between the control group and the experimental group in the physical and mahari distance measurement under consideration for karate players in favor of the experimental group."

Table 8, Figure 5 and Figure 6 also show the differences between the two distance measurements of the physical and skill tests under consideration for the control and experimental groups at a moral level of 0.05 where the value of (t) calculated in the vertical jump test (12.33), as the value of (t) calculated in the horizontal jump test (18.15), as the value of (t) calculated in the skill test of Kazami Mawashi Jerry Left (4.224), The value of (t) calculated in the skill test of Kazami Mawashi Jerry Yameen (4.029), the value (t) calculated in the skill test of Kazami Ora Mawashi Jerry Left (4.308), and the value (t) calculated in the skill test of Kazami Ora Mawashi Right (5.114), all of these values are greater than the value of (t) scheduling.

It is also clear that the average distance measurements of the control and experimental groups, where the average distance measurement of the control group in the vertical jump test was (38.27) and the average distance measurement of the experimental group was (43.36), the average distance measurement of the control group in The horizontal jump test was 1.80, the average distance measurement of the experimental group was 1.96, while the average distance measurement of the control group in the Ksami Mawashi Jerry Left skill test was 1.43, while the average distance measurement of the group Experimental has reached (2.09), The average distance measurement of the control group in the Ksami Mawashi Jerry Right skill test was 1.864, the average distance measurement of the experimental group was 2.26, while the average distance measurement of the control group in the Kazami Ora Mawashi skill test was 2.26. Jerry Left (1.59) and the average distance measurement of the experimental group was (2.53), while the average distance measurement of the control group in the skill test of Kazami Ora Mawashi Jerry Right was (1.63) and the average distance measurement of the group The pilot has reached (2.26).

It is also clear that the improvement rate in the vertical jump test was 11.73%), while the improvement rate in the horizontal jump test was 8.26%, while the improvement rate in the Ksami Mawashi Jerry Left skill test was 31.86%), while the improvement rate in the Kzam skill test was 31.86%), while the improvement rate in the Kzam skill test Jerry Mwashi Symen (17.69%), while the improvement in the Ksami Ora Mawashi Jerry Left skill test was 36.91%, while the improvement in the Kzami Ora Mawashi Jerry Right skill test was 28.5%).

The differences in averages between the two remote records of the control and experimental groups in the tests under consideration are also evident, with the value of differences in the vertical jump test (5.09), while the differences in the horizontal jump test (0.162), while the differences in the Kzam skill test were 0.162. Jerry Left Mawashi (0.666), while the differences in the Ksami Mawashi Jerry Right Skill Test (0.40), while the differences in the Kazami Ora Mawashi Jerry Left Test (0.934), while the differences in the Test were 0.934. The value of the differences in the Kazami Ora Mawashi Jerry Right Test (5.114).

The researcher attributes these differences, which showed the remote measurement of the control and experimental groups in favor of the experimental group in which the experimental research sample was exposed to the proposed training program and the included training units, which had a significant impact through resistance rope training (TRX) in the development of the level of physical and skills tests under consideration in the players, on the contrary the failure of the control group to use the proposed program, This led to a decrease in the level of physical and skill performance from the experimental group and therefore the differences and improvement ratios between the two distance measurements of the control and experimental groups in favor of the experimental group as physical performance and skill must be done through special exercises to develop the skill level of the players.

This is consistent with the study (Maryam Mustafa) [16], the study (Mahmoud Al-Maghawari) [12], the study (Abdulaziz Jassim) [8], the study (Nesma Faraj) [18], the study (Emad al-Din Shaaban) [10], and the study (Hamdi Saleh) [3], study (Mahmoud Mohammed) [14], study (Mahmoud Mukhtar) [15], study (Mustafa Ismail) [17], study (A. S.) [2], study (Norah Misbah) [19] and study (Rashid Abu Al-Hajjaj) [4].

5. Research Conclusions

In the light of the objectives and assumptions of the research and the conclusions drawn from the research experience and the measurements used and through statistical analysis of the results, the following conclusions were reached:

1. Design a training program using resistance rope training (TRX) and find out its effects on the physical and mahar performance of the community builders in karate.
2. The proposed training programme applied to the pilot group has led to a significant improvement in the physical and skills tests of community builders in karate.

6. Research Recommendations

In light of the objectives and assumptions of the research and the results presented, the researcher recommends:

1. Attention to designing training programs using resistance rope training (TRX) and knowing its effects on the physical and hari performance of the builders of the comiti in karate.
2. Interest in the development of resistance rope training (TRX) to improve the level of physical and mahar performance of the community builders in karate.
3. Further research related to the Training of Resistance Ropes (TRX) on other samples of karate players.
4. Contribute to trying to inform karate coaches about the training program to benefit from it in the training process.

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