

Evaluating a training program using TRX & Vopr exercises and its effect on the performance level of some Kung Fu skills

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Introduction to the research:

Physical fitness is of great importance in various sports and its importance comes in that it forms the basis for the skillful performance of players and provides them with energy sources for performance, as it is subject to scientific and educational principles and foundations that may contribute effectively to the appropriate numbers to perform the duties required of the individual athlete to achieve advanced centers in activities Different.

There are many modern methods and means by which the trainer can design an effective training program that enables him to improve athletic performance, which are TRX & Vopr fitness training exercises, through which the development of general fitness elements and special sporting skills can be integrated into sports programs for different sports such as: arts Self-defense, tennis, swimming, foot, basketball, gymnastics, and other sports(٧٥) .

TRX exercises rely on using body weight to develop strength, endurance, flexibility, balance, and strength tolerance, and can be used for everyone without differentiation in age or gender. It relies on a tool that enables its practitioners to perform hundreds of exercises to reach any fitness goal(٧٤) .

All Wesley D. Dudgeon and 2015 announces that recently known exercises as "Total Body Resistance Exercise", abbreviated TRX, appeared in various forms of hundreds of years in the fighting units of the Roman Army, and also entered the ancient Chinese acrobatic movements currently known as gymnastics, And its use evolved in the 19th century to be used in exploratory trips and mountaineering in combat training, and explains recently the boom of the physical and skill level of gymnasts to benefit from the experiences of previous generations in the use of ropes for training to resist body weight, and established total body resistance training or TRX attachment exercises that we know today

Through Randy Hatrick, after graduating from the University of Southern California in 1987, he spent 14 years as a commander of the Navy SEAL, and during his career he was looking for a way to keep fit for the multitude of joint military operations and the diversity of its locations without the need for traditional tools that he carried with him.

Finally, the answer was found in the TRX attachment drills, where it started with two parachute bars that were placed with the rubber boat repair tools to eventually become the TRX tool, and after a short time there was an increased growth of the exercises used on this tool. (20: 66, 67)

Lukáš Sláma 2011 m indicates that the soldiers called it "the tool" and in an attempt to adjust it to fit all the different body weights, and they tried to find a point to connect it and found that it can be hung in doors, water tanks or jeeps. (12:21)

Bc illustrates both. Martin Hajnovič 2010 AD, Martin Tůma 2014 AD that after several years passed the TRX tool became one of the basic tools in training the armed forces and fitness centers, and these exercises quickly became the cornerstone of sports programs, and their use by hundreds of professional athletes in football, baseball, basketball, Hockey, martial arts, triathlon, golf, tennis, swimming, ice skating, sail, motorbikes and other sports are used in high schools throughout the United States as a basis for fitness training. (15:19) (17:18)

Michael Miranda 2010 indicates that the tool used in the TRX training system consists of two nylon straps that do not have any percentage of adjustable rubber (by length) with padded handles and foot straps attached to each strap, attached to an upper anchor point and weigh (890) Gm), and among its advantages is to allow the practice of the largest number of diverse exercises that are comprehensive for the whole body much more than traditional exercises, and for its light weight and small size it can be taken anywhere, and contribute to the development of fitness elements without the need for any other devices, and the development of all elements through one tool It only works for the training of small and large muscles, and for all age groups for males and females, athletes, non-athletes, healthy people and those with physical disabilities, and it can also develop general fitness elements and special sports skills. (22: 5)

TRX exercises rely on the use of gravity for body weight to develop strength, ability, endurance, flexibility, balance, and endurance of strength, and can be used for everyone without differentiation in age or gender to enable practitioners to perform hundreds of exercises to reach any fitness goal. It can be used in a variety of ways, and it can be adjusted according to the characteristics of the user, and its performance depends on the muscles of the abdomen, back, pelvis and chest, and a weight jacket can also be added to increase the body weight to increase the size of the muscles. It can also increase the heart rate and burn high calories more than standing and sitting during the

practice of traditional exercises and thus increases the strength of the heart muscle and increase muscle endurance. (27) (25) (28)

"Tommy Bao" notes that the use of Vopr exercises prevent common injuries, and working on this tool helps to strengthen the legs and helps to improve energy systems, increase stability and balance, and achieve maximum muscle growth. (27)

Training on the Vopr tool is based on patterns of movement based on resistance and therefore requires a high degree of physical performance to do this type of movement, and develops agility and strength by moving the body with a natural balance and the use of multiple muscle groups at one time. (30)

The researcher believes that TRX & Vopr exercises can be combined for the following reasons:

These exercises are fun, challenging and beneficial performance for everyone and for all levels of fitness.

Various qualitative exercises can be devised similar to the performance of the skills of Kung Fu players to improve the physical and skill condition.

These exercises are a complete fitness program for the whole body, and rely on resistance against gravity to develop strength, balance, flexibility, muscular endurance, ability and agility.

- These exercises can be used to bridge the gap in traditional exercises as they develop strength with agility.

The research problem

Through the researcher's studies of theoretical readings and a reference survey of studies and scientific research, he found that there was no study that dealt with TRX & Vopr training in kung fu despite its important effects in fitness training due to the novelty of the topic on the level of sport in general, and the researcher believes that the training process on Physical traits are separate through training each separate muscle. It requires a lot of time and many tools and equipment in the fitness hall. In addition, training for separate physical traits makes the player lose the ability to link between the physical traits, compatibility and muscular sequence, which makes the player distinct in physical fitness tests, not merging muscles. Working in skills until the player has certain proportions of the different requirements of that sport, and this sparked the interest of the researcher to study the effect of a program using TRX & Vopr exercises on the level of performance of some skill variables in kung fu

Research objective:

The research aims to design a proposed program using TRX & Vopr exercises at the level of performance of some kung fu skills to identify:

1. The effect of using the proposed training program on the level of some physical variables of the kung fu players
2. The effect of using the proposed training program on improving the performance level of some kung fu skills

Research questions

1. There are statistically significant differences between the pre and post measurements in favor of the telemetry in the level of some physical variables of the Kung Fu Sanda player under consideration.
2. There are statistically significant differences between the pre and post measurements in favor of the telemetry, the level of some skill variables for the kung fu player under discussion.

search terms:

1- TRX (Total Body Resistance Exercise): It is exercises that rely on the use of body weight against gravity, through a hanging tool consisting of two nylon straps that do not have any percentage of rubber that is adjustable in length and have handles and carriers for the foot, used to develop all elements of fitness Where its exercises include the whole body, and its exercise is suitable for all groups of males, females, healthy people with special needs, athletes and non-athletes. (Procedural definition)

2- Vopr Tool: It is a sophisticated tool that is a tube made of high-quality rubber and has three handles to accommodate many different exercises and can be used for all ages for different weights as weights range from 4-26 kg, and is used in improving the fitness elements and is the best tool for use and guidance Body energy, which is a mixture of lifting, pulling and pushing movements, rotations, throwing and traction. (Procedural definition)

3 Sanda

We are still competitors at a specific time on a square-shaped rug equal in the Sunni journey and weight and of the same sex, each of them tries to win over the opponent in the ways permitted by the law of Kung Fu. (1:11)

Research Methodology:

The researcher used the experimental approach to suit the nature of this research, and the researcher relied in this study on designing the (post-tribal) measurement for one experimental group

Research Society and Sample:

The research community included a number (22 players Boys) in the period from 15-17 years, and they were deliberately selected from the Kung Fu players in the Republic Club registered with the Egyptian Kung Fu Federation. (4) players were excluded from whom the conditions were not met, as was chosen (6) Players to be the study sample, and the basic study sample reached (12) players

Table (1)

Statistical characterization of the measurements of the basic variables

١٨ = ٠

Torsional coefficient	Standard Deviation	Intermediate	Average	Unit of measurement	Variables	Sample
٠,٠٥	٠,٧٥	١٦	١٦,٢٢	Year	Age	The total research sample (experimental and exploratory)
٠,٦١	٥,٧٨	١٦٧,٥٠	١٦٧,٦٠	cm	Length	
٠,٩٣	٥,٧٨	٦٦	٦٧,٤٠	Kg	the weight	
٠,٥٥	٠,٩٦	٩	١٠,٩٢	Year	Training age	

It is clear from Table (1) that all the values of the convolution coefficients calculated for the variables (age - length - weight - training age) for the basic research sample ranged between (-61,0: 0.93), and all these values are between $\frac{2}{3}$, which indicates that On the homogeneity of the research sample in these variables.

Homogeneity of the research sample (exploratory - basic) in the physical and skill variables under consideration:

Table (2)

Arithmetic mean, median, standard deviation, and torsion coefficient of the sample (in the variables in question

Torsional coefficient	Standard Deviation	Intermediate	Average	Unit of measurement	Variables	Variables
.523	1.36626	62.0000	62.3333	a second	The 400-meter test was done	Physical
.723	1.86190	30.0000	30.6667	Number	Arm bending test from oblique flatness	
.811	3.44480	39.0000	39.3333	Number	Sitting test from lying down (knees bent) "30s"	
-.271	5.41910	177.5000	177.8333	meter	Wide jump test of stability	
-1.166	1.96638	26.0000	25.3333	Number	European test	
٠,٢٥	٢,١٧	٣٨	٣٨,٣٠	Kg	The preferred grip strength in a manometer	

١,٢٣	٣,٤٧	١٣٣	١٣٣,٨٠	Kg	The strength of the back muscles in dynamometers	Skillful
٠,٦٤	٥,٢٨	١٣٧	١٣٩	Kg	The leg muscles strength in dynamometer	
٠,٩٠ -	٠,٩١	١٢	١٢	Number / s	Full arm folds of oblique flatness (10th)	
0.3942	0.73679	3.000	3.400	Degree	Left straight punch performance	
0.4607-	0.83381	2.000	2.5333	Degree	Right straight punch performance	
0.5823-	0.41404	4.000	4.200	Degree	Left front kick performance	
0.4596	0.83381	4.000	4.1333	Degree	Performing the right circular kick	
0.8936-	0.5164	2.100	2.4667	Degree	Performing a fall on a man and the hereafter	

It is clear from Table (2) that the values of the torsional coefficients in the variables under investigation were confined between (± 3), which indicates the moderate distribution of the sample, and the homogeneity of the research sample in these variables.

Data collection methods and tools:

The researcher relied on collecting data and information related to the variables under discussion, which work to achieve the aim of the research on the following tools:

Reference survey:

The researcher, within the limits of his findings, reviewed the Arab and foreign scientific literature and reference studies and contacted the international network with the information in order to identify:

Building the theoretical framework that achieves the research goal.

Determine the TRX & Vopr exercises through which the level of physical and skill performance can be developed so that its dynamic composition is similar or can be adjusted to match the direction of the kung fu kinetic path for presentation to experts

Determine the special physical abilities and appropriate tests for each ability to be presented to the experts

Survey study:

The first exploratory study from 1/6/2018 to 13/6/2018. The study aimed at understanding the helpers and players of the concepts of TRX & Vopr exercises and the fundamental differences between training methods and fitness elements in the training method and also to determine the general objectives of the program and the date of implementation of the program is search

Calculating scientific transactions for the tests:

The researcher tested an exploratory sample from the research community and consisted of (6) players from outside the basic research sample and from within the research community and conducted tests and measurements under research, and the validity and reliability of the tests used were calculated as follows:

Validity of the tests

Table (3) Significance of differences in Man-Whitney test for two groups (the distinctive and the non-distinct) sample in special physical abilities tests under consideration $n_1 = n_2 = 6$

Possibility of error	z	Total ranks	Average ranks	Number	Group	Variables	S
.003	1.994	57.00	9.50	6	Distinctive	meters test 400	-1
		21.00	3.50	6	Not distinguished		
				12	Total		
.005	2.122	57.00	9.50	6	Distinctive	Arm bending test from oblique flatness	-2
		21.00	3.50	6	Not distinguished		
				12	Total		
.041	2.244	51.50	8.58	6	Distinctive	Sitting test from lying down "(knees bent) "30s	-3
		26.50	4.42	6	Not distinguished		
				12	Total		
.003	2.000	57.00	9.50	6	Distinctive	Wide jump test of stability	-4
		21.00	3.50	6	Not distinguished		
				12	Total		
.005	-2.738	55.00	9.17	6	Distinctive	European test	-5
		23.00	3.83	6	Not distinguished		
				12	Total		
.003	2.142	51.50	8.58	6	Distinctive	The preferred grip strength in a manometer	-6
		26.50	4.42	6	Not distinguished		
				12	Total		
.003	2.352	51.50	8.58	6	Distinctive	The strength of the back muscles in dynamometers	-7
		26.50	4.42	6	Not distinguished		
				12	Total		
.002	2.424	51.50	8.58	6	Distinctive	The leg muscles strength in dynamometer	-8
		26.50	4.42	6	Not distinguished		
				12	Total		
.01	2.424	51.50	8.58	6	Distinctive	Full arm folds of oblique flatness (10th)	-9
		26.50	4.42	6	Not distinguished		
				12	Total		
0.460	0.740	57.00	9.50	6	Distinctive	Left straight punch performance	-10
		21.00	3.50	6	Not distinguished		
				12	Total		
0.422	0.803	55.00	9.17	6	Distinctive	Right straight punch performance	-11
		23.00	3.83	6	Not distinguished		
				12	Total		
0.223	1.219	51.50	8.58	6	Distinctive	Left front kick performance	-12
		26.50	4.42	6	Not distinguished		
				12	Total		
0.195	1.295	51.50	8.58	6	Distinctive	Performing the right circular kick	-13
		26.50	4.42	6	Not distinguished		
				12	Total		
0.950	0.063	57.00	9.50	6	Distinctive	Performing a fall on a man and the hereafter	-14
		21.00	3.50	6	Not distinguished		
				12	Total		

The tabular "z" value at the 0.05 level of significance is 1.96

From table (17), it is clear that there are statistically significant differences between the distinct and non-distinct group in the special physical capabilities under investigation, where the calculated "z" value is greater than the tabular "z" value at the level of significance 0.05, which indicates the validity of the tests under consideration

Stability coefficient:

Table (4)

Correlation coefficient between the first (second) applications of the physical ability variables under consideration

ن = ٦

Correlation coefficient	The second application		The first application		measuring unit	the exams
	deviation	Mean	deviation	Mean		
.843*	1.37840	62.5000	1.36626	62.3333	meter	400 m test conducted
.807*	2.04124	31.1667	1.86190	30.6667	a second	Arm bending test from oblique flatness
.881*	3.03315	40.0000	3.44480	39.3333	a second	Sitting test from lying down (knees bent) "30s"
.976*	4.96655	177.3333	5.41910	177.8333	Number	Wide jump test of stability
.910*	1.78885	25.0000	1.96638	25.3333	cm	European test
.847*	١,٣٣	٢٩,٣٠	١,٦٣	٤٢,٧٠	Kg	The preferred grip strength in a manometer
.934*	٣,٥٢	١٢٤,٧٠	٢,١٣	١٤٢,٩٠	Kg	The strength of the back muscles in dynamometers
.846*	٤,٦٩	١٣٥,٥٠	٢,٢١	١٤٤,٧٠	Kg	The leg muscles strength in dynamometer
.799*	٠,٥٢	٨,٥٠	٠,٧٣	١٤,١٠	Number / s	Full arm folds of oblique flatness (10th)
.923*	0.70373	3.342	0.73679	3.400	Degree	Left straight punch performance
.945*	0.72375	2.425	0.83381	2.5333	Degree	Right straight punch performance
.687*	0.5154	4.100	0.41404	4.200	Degree	Left front kick performance
.984*	0.41404	4.241	0.83381	4.1333	Degree	Performing the right circular kick
.989*	0.5163	2.362	0.5164	2.4667	Degree	Performing a fall on a man and the hereafter

Attached 'R' value at the level of significance (0,05) = (0,755)

It is clear from Table (4) that there is a significant correlation at the level of significance (0.05), where the value of correlation coefficient ranged between (0.807 to 0.989), which indicates that the tests are of a high degree of stability and therefore suitable for use.

Program preparation:

The main objective of the program:

Learn about the effect of a program using TRX & Vopr exercises on the level of performance of some physical variables and the skill level of kung players

The standards of the training program:

Program flexibility and adaptability.

Consider the principles of training when developing the program.

The program should be in line with the objectives set.

The suitability of the training program and its contents for the Sunni phase of the chosen sample.

Regular practice of the exercises established in the program so as to bring about the desired benefit.

Take into account that the performance and training of skills are in the form of swimming training.

The limitations of the training program:

Table (5)

Training program variables

The contents of the program:

period	Program variables	s
Three months (8) weeks	program duration	.1
Special preparation period and pre-competitions	Implementation period	.2
(5) units per week	The number of training units per week	.3
%10	Warm-up ratio	.4
%20	The percentage of the skill part	.5
%60	TRX & Vipr training ratio	.6
%0	Final portion ratio	.7
(40) alone	The number of units of the program	.8
40 days	The number of training days	.9
(240 BC) = (60 hours).	Training hours	.10
60 minutes	Training unit time	.11
(85%) High load	The general intensity of the program	.12
(The interval is high and low intensity - iterative).	Training methods used	.13

The main elements that the training unit includes in the training program are:

1. The introductory part (warm-up period):

The warm-up aims to revitalize the vital physiological systems necessary for the requirements of the body's activity.

2. The main part (basic training period) includes:

Skill Training: Skills in Sunda Sports

TR TRX & Vipr Training: Kung Fu Sports.

3. The final part (the sedation period): a return to normal physiological state

Basic study:

Tribal measurements

The researcher applied the tribal measurements of the players and determines the level of physical performance and skill level and determines the maximum limits for the training used to codify the training load and the application of the principle of individualism in training. From 14/6/2018 to 15/6/2018.

Application of the program:

The researcher applied the training program from 17/06/2018 to 17/8/2018 for a period of 8 weeks at five training units per week.

Dimensional measurements:

The researcher applied the dimensional measurements of the research sample in the period from 18/8/2018 to (20/8/2018).

Statistical treatments:

The researcher uses SPSS program in statistical treatments suitable for research:

Median. Mediator. Deviation. - Sprains - Mann Whitney Test.

The researcher determined the percentage of change according to the following formula:

4/0 Presentation and discussion of results:

Table (6)

The significance of the differences between the mean standard (tribal - dimensional) group In physical abilities and the digital level measurements

$n = 12$

Possibility of error	z	Total ranks	Average ranks	Number	Group	Variables	S
.002	*3.064	78.00	6.50	12	-	400 meters test	.1
		0.00	0.00	0	+		
				0	=		
				12	Total		
.002	*3.068	0.00	0.00	0	-	Arm bending test from oblique flatness	.2
		78.00	6.50	12	+		
				0	=		
				12	Total		
.002	*3.063	0.00	0.00	0	-	Wide jump test of stability	.3
		78.00	6.50	12	+		
				0	=		
				12	Total		
.002	*3.069	0.00	0.00	0	-	European test	.4
		78.00	6.50	12	+		
				0	=		
				12	Total		
.002	*3.078	0.00	0.00	0	-	The preferred grip strength in a manometer	.5
		78.00	6.50	12	+		
				0	=		
				0	Total		

				12	Total		
.003	2.462	78.00	6.50	0	-	The strength of the back muscles in dynamometers	.٦
		0.00	0.00	12	+		
				0	=		
				12	Total		
.003	2.635	78.00	6.50	0	-	The leg muscles strength in dynamometer	.٧
		0.00	0.00	12	+		
				0	=		
				12	Total		
.002	2.565	0.00	0.00	0	-	Full arm folds of oblique flatness (10th)	.٨
		78.00	6.50	12	+		
				0	=		
				12	Total		
0.001	-3.334*	78.00	6.50	0	-	Left straight punch performance	.٩
		0.00	0.00	12	+		
				0	=		
				12	Total		
0.000	-3.587*	78.00	6.50	0	-	Right straight punch performance	.١٠
		0.00	0.00	12	+		
				0	=		
				12	Total		
0.000	-3.600*	78.00	6.50	0	-	Left front kick performance	.١١
		0.00	0.00	12	+		
				0	=		
				12	Total		
0.000	-3.587*	78.00	6.50	0	-	Performing the right circular kick	.١٢
		0.00	0.00	12	+		
				0	=		
				12	Total		
0.000	-3.600*	78.00	6.50	0	-	Performing a fall on a man and the hereafter	.١٣
		0.00	0.00	12	+		
				0	=		
				12	Total		

The tabular “z” value at the 0.05 level of significance is 1.96

Table (7)

The arithmetic mean and the standard deviation of the research measurements (tribal-dimensional) in the variables of the physical variables and the numerical level under consideration N = 12

Rate of change	Dimensional measurement		Tribal measurement		measuring unit	the exams	the exams
	deviation	Mean	deviation	Mean			
12%	.72090	55.7833	1.38170	62.5000	meter	400 m test conducted	Physical
14%	1.62135	35.4167	1.62135	30.4167	a second	Arm bending test from oblique flatness	
12%	2.77843	44.5833	3.11764	39.4167	a second	Sitting test from lying down (knees bent) "30s"	
4%	4.54189	184.4167	5.28219	177.0833	Number	Wide jump test of stability	
18%	1.05529	30.2500	2.00567	24.7500	cm	European test	
%١٦,٣٦	٢,٢٩	٤٤,٨٠	١,٩٥	٣٨,٥٠	Kg	The preferred grip strength in a manometer	
%١٠,٨٦	٠,٨٤	١٤٨,٥٠	٣,٦٢	١٣٣,٥٠	Kg	The strength of the back muscles in dynamometers	
%٩,٧٩	١,٧١	١٥٢,٤٠	٤,١٣	١٣٨,٨٠	Kg	The leg muscles strength in dynamometer	

%٢٧,٢٧	٠,٥١	١٥,٤٠	٠,٩٩	١٢,١٠	Number / s	Full arm folds of oblique flatness (10th)	
143%	0.70373	8.2667	0.73679	3.400	Degree	Left straight punch performance	Skillful
203%	0.72375	7.6667	0.83381	2.5333	Degree	Right straight punch performance	
78%	0.5154	7.4667	0.41404	4.200	Degree	Left front kick performance	
98%	0.41404	8.200	0.83381	4.1333	Degree	Performing the right circular kick	
122%	0.5163	5.4667	0.5164	2.4667	Degree	Performing a fall on a man and the hereafter	

It is clear from Table (7), which shows the mean value and the standard deviation of the tests under discussion in the pre and post measurements of the research sample.

The researcher attributes the statistically significant differences, and the percentage of improvement occurred in a young person in the measurements of (physical-skill abilities) under investigation to:

The positive effect of the proposed training program using TRX & Vopr exercises applied to the group. The training program contained a set of different physical skills training similar to the dynamic path to the nature of the performance of the motor skills in question, and aims to develop some special physical capabilities as well as improving the skill level

Focus on the working muscles during the kinetic performance of the sanda.

The accuracy of choosing TRX & Vopr exercises applied within the proposed training program in the physical preparation part with appropriate intensity, repetitions and interfaces, as these exercises have been developed based on the qualitative and technical analysis, and perform in the same kinematic paths of the selected skill performances under consideration.

Take into account the gradual training loads when developing training units similar to competition conditions.

It agrees with Khairia Al-Sukari and Muhammed Bureiqa 2001 AD that maximum development can be achieved from training if exercises take the form and nature of skillful performance of the type of activity practiced. Effects of training occur for parts and body systems that fall directly under the influence of the training load. (1:35)

And agrees with each of Essam El-Din Ahmed Abdel-Khaleq 2005 AD, Mahrousa Hassan 2014 AD that the more similar exercises in their dynamic construction of the movement to be learned, the more learning and improved the athletic skill performance. (2: 240) (3:45)

Vipr exercises are based on an important basic idea that all of their movements have a functional purpose, where lengthening leads to shortening in multiple directions, so that it forms the functional basis for them. (114)

Nidal Faisal Abu Al-Filat 2013 adds that Vipr exercises are different in terms of their combined exercises (exercises using more than one muscle at the same time) and work to improve aerobic work and improve flexibility and balance and develop the effectiveness of body muscles in addition to burning calories through strength and movement of training that can To perform it at multiple levels and to practice a set of complex movements that can be performed. (6:10)

Dannelly, and all 2011 AD states that TRX attachment exercises work on the area of the muscle section and the diameter of the thick muscle fiber in the trained muscle by focusing on the center muscles, so the muscle fiber grows and thus increases the amount of protein in the muscles, which leads to the acquisition of the muscle tone. (68: 150)

In this regard, Burns Nick 2007 indicates that TRX attachment exercises are considered a form of functional resistance that aims to direct the resulting force in the direction of performance and lead to multi-level and integrated movements. (13: 7)

Conclusions:

- 1- The proposed training program that has a significant effect on (the level of special physical abilities)
- 2- The proposed training program applied has a significant effect on (skill level)
- 3- The proposed training program is a step towards functional training in physical changes, as it contains integrated training at the skill level

Recommendations:

- 1- The necessity of paying attention to using TRX & Vipr training to improve the level of performance (physical and skill) and applying it to other skills.
- 2- Carrying out studies using TRX & Vipr training on players
- 3- Conducting studies using TRX & Vipr training
- 4- Taking the study results into consideration when designing TRX & Vipr training programs.

Rhythmic technical exercises and physical characteristics

References

1. Amin Anwar El-Khouly: Kung Fu (Washo), Dar Al-Fikr Al-Arabi 2001.
2. Khairia El-Sokary, Mohamed Berekaa: Integrated Training Series for the Champion's Industry 6-18 years, Part Two, Monshaat Al-Maaref, Alexandria, 2001
3. 2. Essam El-Din Ahmed Abdel-Khalik: Mathematical Training Theories - Applications, 12th Edition, Ma'arif Al-Maaref, Alexandria, 2005 AD.
4. 3. Mohamed Sobhy Hassanein, Measurement and Evaluation in Physical and Sports Education, Part One, 4th Edition, Dar Al-Fikr Al-Arabi, Cairo, 2001.
5. 4. Yahya Al-Sayed Al-Hawi, Sports Coach between Traditional Method and Modern Technology in Training, Arab Book Center for Publishing, Cairo, 2002.
6. 5. Dalia Radwan Labib, The effect of using the suspended TRX device in the physical education lesson on some elements of physical fitness for prep school students, unpublished master thesis, Faculty of Physical Education for Girls, Helwan University, 2014.
7. 6. Maryam Mustafa Mohamed The effect of a program using the TRX device on developing fitness elements of some offensive skills for basketball players, unpublished Master Thesis, Faculty of Physical Education for Girls, Helwan University, 2015.
8. 7. Nidal Faisal Abu Al-Filat The effect of a proposed training program using the "Viper" tool on the endurance of strength for fitness club goers, research to complement the graduation requirements for a bachelor's degree, College of Physical Education, University of Jordan, 2013.
9. 8. Samah Mohamed Abdel-Moaty, the effectiveness of the TRX training method on some special physical abilities and the digital level of swimmers 100 meters free. Scientific Journal of Physical Education and Sports Science, Faculty of Physical Education for Boys in Al Haram, Helwan University, No. (76), Part (4) 268, 2016 m.
10. 9. Mahrous Mohamed Kandil, Manal Talaat Mohamed, Nesma Mohamed Farraj The effect of the TRX program on total resistance to the body on developing basic leaps in rhythmic artistic exercises for students of the Faculty of Physical Education in Mansoura, Scientific Journal of Physical Education and Sports Sciences, Faculty of Physical Education, Mansoura University, before publication Dated August 2016, and publication number 28 March 2018.
11. 10. Nesma Mohamed Farag Abdel-Azim, The Effect of the Total Resistance Training Exercises Program for the Body on the Level of Performance of Some Basic Skills in Rhythmic Artistic Exercises and Physical Attributes for Students of the Faculty of Physical Education, Unpublished Doctorate Thesis, Faculty of Physical Education, Mansoura University, 2016 CE
12. 11. Physiologic and Metabolic Effects of a Suspension Training Workout, International Journal of Sports Science, 5 (2): 65-72, 2015: Wesley D.

- Dudgeon, Judith M. Herron, Johannas A. Aartun, David D. Thomas, Elizabeth P. Kelley, Timothy P. Scheett
- 13.12. TRX (Závesný trénink), Diplomová práce, masarykova univerzita, Fakulta sportovních studií, Brno, 2010.: Bc. Martin Hajnovič
 - 14.13. Využití TRX - závesného tréninku u hráče ledního hokeje, Bakalářská práce, masarykova univerzita, Fakulta sportovních studií, Brno, 2011.: Lukáš Sláma
 - 15.14. Využití TRX v tréninku juda, Bakalářská práce, masarykova univerzita, Fakulta sportovních studií, Brno, 2014.: Martin Tůma
 - 16.15. TRX make your body your machine, CPT, MP, 503d MP Bn (ABn) TF Ripcord, FOB Lightning, Afghanistan, 2010.: Michael Miranda
 - 17.16. Application of TRX and RIP training to the development of strength endurance in tennis, ITF Coaching and Sport Science Review, 11 November 2012.
 - 18.17.: Jordi Martínez, Carlos Beltrán, Iván Alcalá, Richard Gonzalez TRX make your body your machine, CPT, MP, 503d MP Bn (ABn) TF Ripcord, FOB Lightning, Afghanistan, 2010.
 - 19.18. Michael Miranda Effects of Instability versus Traditional Resistance Training on Strength, Power and Velocity in Untrained Men, Journal of Sports Science and Medicine, 460-468,13, 2014.
 - 20.19.: José Luis Maté-Muñoz, Antonio J. Monroy Antón, Pablo Jodra Jiménez, Manuel V. Garnacho-Castaño Využití TRX v tréninku juda, Bakalářská práce, masarykova univerzita, Fakulta sportovních studií, Brno, 2014.
 - 21.20.: Martin Tůma Využití TRX v thajském boxu, Bakalářská práce, masarykova univerzita, Fakulta sportovních studií, Brno, 2014.
 - 22.21.: Vojtech Dvorák TRX SUSPENSION TRAINING METHOD AND STATIC BALANCE IN JUNIOR BASKETBALL PLAYERS, STUDIA UNIVERSITATIS BABES-BOLYAI EDUCATIO ARTIS GYMNASTICAE, ROMANIA, pp. 27 - 34., LX, 3, 2015.
 - 23.22. BOROS-BALINT IULIANA, DEAK GRAȚIELA-FLAVIA, MUȘAT SIMONA, PĂTRAȘCU ADRIAN Effects Of Angle Variations In Suspension Push-Up Exercise, National Strength & Conditioning Association, March 3, 2016
 - 24.23.: Gulmez, Irfan The design of a judo-specific strength and conditioning programmer, Department of Sports Therapy, university College Birmingham, U.K., 2010.
 - 25.24. Sukhjivan Singh Ian lahart, Paul Robertson Effect of TRX Training Module on Legs Strength and Endurance of Females, M R INTERNATIONAL JOURNAL OF APPLIED HEALTH SCIENCES, October 2015.
 26. Third: The Internet
 - 27.25. <http://varzeshvasalamat.persianblog.ir/post/18/,1391>
 - 28.26. http://suspensiontrainingaustralia.com.au/2012/index.php?option=com_cont

- 29.27. ent & view = article & id = 1 & Itemid = 132
- 30.28. <http://seattlehealthandfitness.blogspot.com/2010/07/what-is-TRX-suspension-training.html>
- 31.29. http://suspensiontrainingaustralia.com.au/2012/index.php?option=com_cont
- 32.30. ent & view = article & id = 1 & Itemid = 132
- 33.31. [http://www.calgaryherald.com/health/resistance+training+tool+improves+trend + toward + movement + training / 8789539 / story.html](http://www.calgaryherald.com/health/resistance+training+tool+improves+trend+ toward + movement + training / 8789539 / story.html)
- 34.32. <http://www.rmhp.org/blog/2013/01/30-minute-workout-with-the-vipr>
- 35.33. <http://www.menshealth.com.sg/>