Appendix (A) :

(1)TRX :

The TRX Pro 3 System is the prime suspension trainer for full-body workouts. This system comes with a suspension trainer, a suspension anchor, a door anchor, a getting-started guide and access to the TRX Training Club app.The carabiner, safety tested for up to 700 lbs, has locking loops to prevent slipping, adjusters to quickly change the length during your workout, durable foam handles for comfort, and foot cradles to amp up any routine. Weighing less than a pound, TRX Dimensions LxWxH 53 x 1.5 x 6 inches. Item Dimensions L x W x H8.15 x 6.81 x 4.53 inches, Weight1.38 Kilograms, Country of Origin United States, Manufacturer, Model Year2014

Included Components Trx Mesh Carrying Bag, 65-Minute Basic Training Dvd, Trx Suspension Training P2 Model, Full-Color 35 Page Workout Guide, Trx Metabolic Blast Bonus Workouts, Trx Endurance Circuit, Trx Door Anchor .

2) Power Plate Pro5 Vibration Trainer

Technical Specifications

Dimensions (WxDxH): 34in x 43in x 61in / 87cm x 109cm x 155cm, Platform Dimensions (WxD): 34in x 37in / 86cm x 94cm,Weight: 328lb / 149kg, Maximum Load: 400lb / 182kg, Power Supply: 90-240 VAC, 50/60Hz Universal Voltage, Nominal Power in Operation: 200-225W.Time Selections: 30, 45 or 60 seconds / up to 9 minutes, Frequency / Pre-set Frequencies: 25-50Hz / 1 Hz increments, Vibration Energy Output (amplitude): Low / High

Precision Wave™ Technology: High-fidelity harmonic vibration system that provides uncompromising performance for unsurpassed results, Dual Sync™ Twin Motor System: Dual Sync Twin Motor System maintains precise balance at any frequency and amplitude level, allowing perfect synchronization of vibration for maximum muscle response and efficiency .

OPERATING THE POWER PLATE® PRO-SERIES MACHINES

1st Row: Main Controls

- "Start"
- "Repeat"
- "Stop

2nd Row:

- Incremental adjustment for the frequency (between 25 and 50 Hertz in 1 Hertz increments) and time (from 30 seconds to 9 minutes)
- "-" : decrease Hertz / Time
- "+": increase Hertz / Time

3rd Row:

- Hertz: Pre-set options of "30," "35," "40" or "50" Hertz

4th Row:

- Time: Pre-set options of "30," "45" or "60" seconds

5th Row:

- "Low/High" button for intensity (amplitude)

REMOTE CONTROL

The Remote Control is accessory with the Power Plate® pro5 AIRdaptive™ model

First row:

- "Start / Stop"
- "Repeat"

Second row:

- Incremental adjustment for the frequency (between 25 and 50 Hertz in 1 Hertz increments) and time (from 30 seconds to 9 minutes)
- "-" : decrease Hertz / Time
- "+": increase Hertz / Time

Third row:

- "Frequency" : Pre-set options of "30," "35," "40" or "50" Hertz
- "Time": Pre-set options of "30," "45" or "60" seconds
- Press one of these buttons and the corresponding pictogram will start to blink on the display. By pressing the same button again, frequency or time will scroll through all available settings.

Fourth row:

- "Low / High" : changes intensity (amplitude)
- "Air" : air adjustment to increase or decrease pressure in the air "bellows"
- Press one of these buttons and the corresponding pictogram will start to blink on the display. Select the desired amplitude (Low or High) and air setting (1, 2 or 3, with 3 as the highest setting).

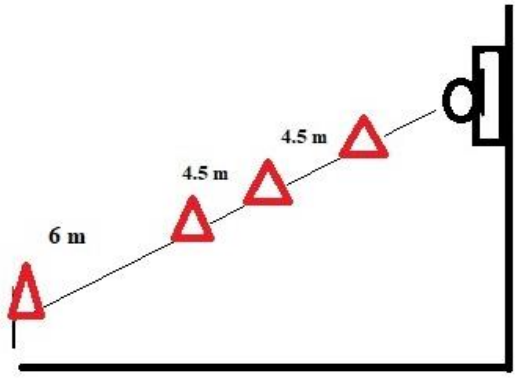
Appendix (B) : Tests

Core Muscle Strength

Core muscular endurance was assessed with a prone forearm PH for maximum time. Participants were required to perform the plank hold with forearms on the ground, elbows at 90 degrees, and contacting the ground directly below the shoulders. The head, shoulders, hips, knees, and ankles were required to be in a straight line during the test. The posture was the same as required by the Army Combat Fitness Test and the plank hold assessment. A demonstration of the correct posture was provided prior to the start of the test. Instructions were to "keep a straight line between your shoulders, hips, knees and ankles" and "hold the position as long as possible". The researchers began the timer when the participant initiated the plank hold. The timer was stopped when the participant exhibited volitional fatigue or noticeable degradation in form of the plank hold. At no point in the test were participants informed of the duration of the plank hold. Once subjects were in the correct position, the test began exactly 5 min following the push-up assessment. During the testing, subjects were provided 1 warning if they began to deviate from the correct posture. Time was recorded to the nearest second on a stopwatch. The isometric prone plank hold has been reported to be a valid and reliable assessment of core muscle function .

Lay up Shooting test :

Lay up shooting was evaluated using the time taken from the starting line to the basket and reaching the starting point three times with a tan score calculated for each shot [See figure 3]. The players were asked to perform the test, where four cones were placed on one line, with the fourth funnel followed by the goal. A starting line is drawn 65 feet (19.5 m) from the target, the distance between the starting line and the second cone is 20 feet (6 m), and the distance between the rest of the cones is 15 feet (4.5 m), a stopwatch. The running tester starts by standing on a line The start with the ball, when hearing the start signal, the tester runs between the cones with the ball dribbling until he reaches the last funnel and aims at the basket, picks up the ball to return in the same manner with the dribble until he crosses the starting line. The time traveled by the tester from the moment of the start signal until it crossed the starting line after performing the steps referred to in the performance specifications is calculated .



Lay up Shooting test (Appendix B).

Appendix (C) : Program

This appendix contains TVT program days, weeks and months of training program, each training has intensity, volume, frequency and combinations for female basketball players.

Table 1.TRX Vibrational Training Program.

Week	Training	(V)			(T)			(TVT)	
		Intensity	Sec×	Rest	Intensity	Set×	Rest	Intensity ×	Rest

			repeats			repeats		Set × repeats	
1	T&V	30 hz	45× 3	30 sec	60%	3× 15	35 sec		
2	V&T	35 hz	40× 2	30 sec	65%	3× 10	40 sec		
3	T&V	35 hz	40× 3	30 sec	70%	3× 10	40 sec		
4	V&T & S	40 hz	45×3	35 sec	75%	3× 10	40 sec		
5	TVT							35 hz×3×15	35 sec
6	TVT							40 hz×3×10	35 sec
7	TVT&S							45 hz×3×15	35 sec
8	TVT&S							45 hz×3×15	40 sec

T,(TRX); V, (Vibration); S,(Skill); TVT (TRX Vibrational Training) .

TRX Vibrational Training Program

Exercises	T&V			T&V			T&V			T&V & S			TVT			TVT			TVT& S			TVT& S		
	Saturday	Monday	Wednesday	Saturday	Monday	Wednesday	Saturday	Monday	Wednesday	Saturday	Monday	Wednesday	Saturday	Monday	Wednesday	Saturday	Monday	Wednesday	Saturday	Monday	Wednesday	Saturday	Monday	Wednesday
1	T 3/15/35 V 30/45/3/30					V 35/40/2/30 T 3/10/40								TVT 35/3/15/35										
2				V 35/40/2/30 T 3/10/40									TVT 35/3/15/35											
3		T 3/15/35 V 30/45/3/30			V 35/40/2/30 T 3/10/40									35/3/15/35 TVT										
4	T 3/15/35 V 30/45/3/30		T 3/15/35 V 30/45/3/30				T 3/10/40 V 35/40/3/30																	
5		T 3/15/35 V 30/45/3/30				V 35/40/2/30 T 3/10/40							TVT 35/3/15/35											
6			T 3/15/35 V 30/45/3/30		V 35/40/2/30 T 3/10/40				T 3/10/40 V 35/40/3/30					35/3/15/35 TVT										
7						V 35/40/2/30 T 3/10/40									35/3/15/35 TVT										
8		T 3/15/35 V 30/45/3/30		V 35/40/2/30 T 3/10/40			T 3/10/40 V 35/40/3/30						35/3/15/35 TVT				40/3/10/35 TVT							
9					V 35/40/2/30 T 3/10/40			T 3/10/40 V 35/40/3/30					35/3/15/35 TVT											
10	T 3/15/35 V 30/45/3/30									V 40/45/3/35 T 3/10/40					35/3/15/35 TVT									
11									T 3/10/40 V 35/40/3/30					35/3/15/35 TVT								45/3/15/40 TVT& S		
12			T 3/15/35 V 30/45/3/30				T 3/10/40 V 35/40/3/30				V 40/45/3/35 T 3/10/40					40/3/10/35 TVT								
13					V 35/40/2/30 T 3/10/40			T 3/10/40 V 35/40/3/30					35/3/15/35 TVT						45/3/15/35 TVT& S				45/3/15/40 TVT& S	
14	T 3/15/35 V 30/45/3/30					V 35/40/2/30 T 3/10/40						V 40/45/3/35 T 3/10/40			35/3/15/35 TVT					45/3/15/35 TVT& S				
15			T 3/15/35 V 30/45/3/30	V 35/40/2/30 T 3/10/40					T 3/10/40 V 35/40/3/30								TVT 40/3/10/35				45/3/15/35 TVT& S			45/3/15/40 TVT& S
16				V 35/40/2/30 T 3/10/40				T 3/10/40 V 35/40/3/30			V 40/45/3/35 T 3/10/40		35/3/15/35 TVT					40/3/10/35 TVT					45/3/15/40 TVT& S	
17		T 3/15/35 V 30/45/3/30					T 3/10/40 V 35/40/3/30			V 40/45/3/35 T 3/10/40					35/3/15/35 TVT						45/3/15/35 TVT& S	45/3/15/40 TVT& S		
18								T 3/10/40 V 35/40/3/30				V 40/45/3/35 T 3/10/40		35/3/15/35 TVT			40/3/10/35 TVT		45/3/15/35 TVT& S				45/3/15/40 TVT& S	
19									T 3/10/40 V 35/40/3/30							40/3/10/35 TVT					45/3/15/35 TVT& S			45/3/15/40 TVT& S
20							T 3/10/40 V 35/40/3/30			V 40/45/3/35 T 3/10/40								40/3/10/35 TVT		45/3/15/35 TVT& S				
21								T 3/10/40 V 35/40/3/30			V 40/45/3/35 T 3/10/40					40/3/10/35 TVT			45/3/15/35 TVT& S			45/3/15/40 TVT& S		45/3/15/40 TVT& S
22									T 3/10/40 V 35/40/3/30			V 40/45/3/35 T 3/10/40											45/3/15/40 TVT& S	
23										V 40/45/3/35 T 3/10/40							40/3/10/35 TVT			45/3/15/35 TVT& S		45/3/15/40 TVT& S		
24											V 40/45/3/35 T 3/10/40							40/3/10/35 TVT			45/3/15/35 TVT& S			
25										V 40/45/3/35 T 3/10/40						40/3/10/35 TVT				45/3/15/35 TVT& S				45/3/15/40 TVT& S
26												V 40/45/3/35 T 3/10/40						40/3/10/35 TVT	45/3/15/35 TVT& S					
27											V 40/45/3/35 T 3/10/40					40/3/10/35 TVT								
28												V 40/45/3/35 T 3/10/40									45/3/15/35 TVT& S		45/3/15/40 TVT& S	
29																	40/3/10/35 TVT			45/3/15/35 TVT& S				45/3/15/40 TVT& S
30																		40/3/10/35 TVT	45/3/15/35 TVT& S			45/3/15/40 TVT& S		

T,(TRX); V, (Vibration); S,(Skill); TVT (TRX Vibrational Training) .
T Set/ repeats/ rest
V hz/Sec/Set/rest
TVT hz/ set/ repeats/ rest

Table 2. Analysis of variance with effect size (η2) values for the main effects (measurement and group) and interaction (measurement group).

	Measurement			Group			Group ×Time Interaction		
	F	P	η2	F	P	η2	F	P	η2
BMI(Kg)	87.810	0.00	0.75	0.887	0.356	0.39	3.153	0.90	0.125
BFP%	338.159	0.00	0.939	99.416	0.00	0.819	99.868	0.00	0.819
FLST(ng/ml)	109.286	0.00	0.832	0.132	0.720	0.006	40.364	0.00	0.647
MSTN(ng/ml)	262.320	0.00	0.923	37.650	0.00	0.631	45.561	0.00	0.674
CMS(s)	964.574	0.00	0.978	48.885	0.00	0.690	225.969	0.00	0.911
Y(s)	550.769	0.00	0.962	195.631	0.00	0.899	101.001	0.00	0.821
Y(SC)	90.829	0.00	0.805	3.020	0.096	0.121	15.40	0.001	0.412

BMI= Body mass index; BFP=Body fat percentage; FLST= Follistatin; MSTN= Myostatin; CMS=Core Muscle Strength; Y= Lay up shooting test; s=second; sc=score; Sig= statistical significance; STD= Standard deviation; DRI= Differences improvement rates .

Table 2 shows significant differences in measurements, (P = 0.00) for repeated measurements. The (η2) effect coefficient ranged between (0.75 and 0.978) . Despite the group It showed a small effect (0.006,0.39) but no FLST or BMI differences that were statistically significant (P > 0.05), and the rest of the variables showed significant (P = 0.00) where the (η2) ranged between large effects (0.631 - 0.819). The results of the interaction also showed that there were non-significant differences in BMI (P = 0.90) and significant differences in the rest of the variables, and the (η2)ranged between (0.647 and 0.911), with a large effect.

Table 3. Descriptive statistics and post hoc differences between the experimental and control groups for the investigated variables.

Variables	Experimental		control		Cohen's d	DRI	P-value
	Pre - Test Mean± STD	Post - Test Mean± STD	Pre - Test Mean±STD	Post - Test Mean± STD			
BMI(Kg)	23.78±0.78	22.73±0.30	23.82±0.78	23.14±0.56	0.64	1.52%	0.037
BFP%	23.63±0.10	21.30±0.49	23.63±0.10	22.95±0.25	2.97	6.94%	0.000
FLST(ng/ml)	1.72±0.18	1.96±0.13	1.79±0.11	1.85±0.08	0.68	10.72%	0.029
MSTN(ng/ml)	3.35±0.02	3.08±0.03	3.36±0.03	3.24±0.07	2.04	4.54%	0.000
CMS(s)	68.03±4.21	96.83±1.19	68.06±4.22	78.07±3.94	4.56	27.62%	0.000
Y(s)	43.88±0.70	36.41±0.89	43.97±0.47	40.98±0.60	4.27	10.23%	0.000
Y(sc)	3.17±1.03	5.17±1.03	3.00±1.04	3.8±1.3	0.79	36.46%	0.012

BMI= Body mass index; BFP=Body fat percentage; FLST= Follistatin; MSTN= Myostatin; CMS=Core Muscle Strength; Y= Lay up shooting test; s=second;sc=score; Sig= statistical significance; STD= Standard deviation; DRI= Differences improvement rates.

Table (3) shows the results of measurements for the experimental and control groups in the studied variables of basketball players, (p < 0.037) at the indicative level (0.05), where it was found that the value of " d" ranged between (0.64-4.56), and the differences in improvement rates ranged between (1.52 and 36.46%).

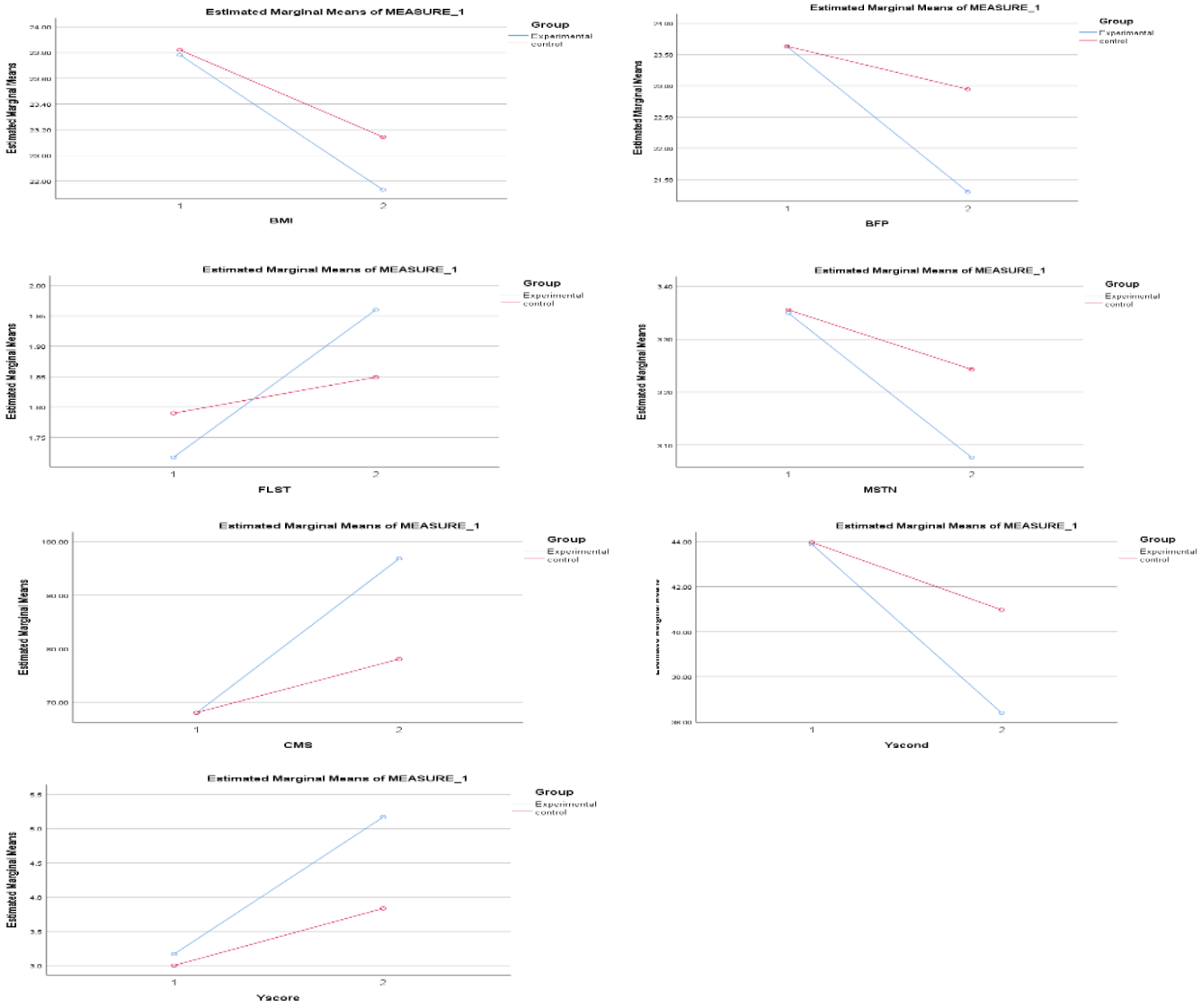


Figure 4. Pre and post measurements of the experimental and control group

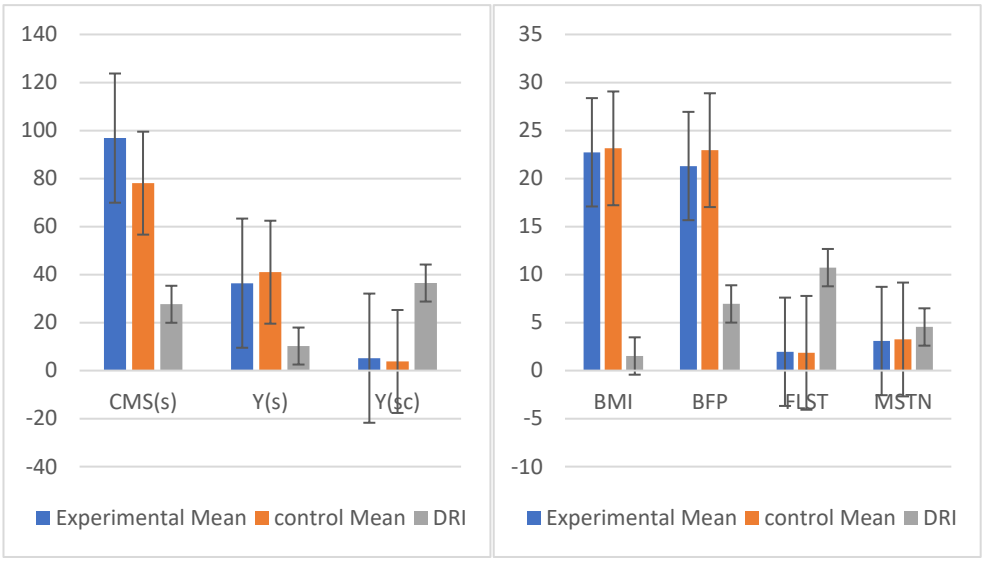


Figure 5. Pre- and post-measurement findings in the variables under study for the experimental and control groups .