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THE EVALUATION OF PHYSICAL FITNESS IMPROVEMENT AFTER 8 WEEKS INDIVIDUAL STRENGTH AND CONDITIONING PROGRAM ON B1 TURKISH NATIONAL FOOTBALL TEAM

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Abstract:
This study aims to evaluate the physical fitness improvement after 8 weeks individual strength and conditioning program on B1 Turkish National Football Team, to reveal their motoric differences and to identify strengths and weaknesses of athletes. 11 male athletes (age ranging between 25,09 ± 3,53) in B1 Turkish National Football Team have participated in this study. Out of these athletes, 9 of whom account for B1 visually impaired football players (footballer) and 2 of whom account for a goalkeeper with no disability. Vertical jump, kneel down health ball throwing, sitting and reaching, 20 m speed, auditory reaction, grip strength, right-left had, pro-agility, anaerobic strength and cooper measurements have been applied with the interval of 8 weeks as pre-test and post-test. All statistical analyses have been conducted by using SPSS 13.0 packet program. While a significant difference has been found in 0.05 level in speed, agility, anaerobic strength and maximal oxygen capacity of the B1 football national team ($p<0,05$), no significant difference has been found out although there is an average improvement between pre-test and post-test in other variables. ($p>0,05$). No significant difference has been found out between pre-test and post-test statistical values of the variables applied to B1 football national team goalkeepers. ($p>0,05$). As a result, an improvement in positive level has been observed in overall performance parameters of B1 football national team athletes and individual strength and condition training prepared according to 8 weeks pre-test results. Raising interest of B1 football national team goalkeepers to the training and creating a competitive environment could prove useful in increasing overall performance levels.

Keywords: B1 football, condition, motoric

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1. Introduction

Visual disability is defined as "*an unrecoverable vision loss adversely affecting educational success of an individual"*. (Craft, 2012) Disabled individuals like other humans have biological, social and psychological requirements such as eating, drinking, loving, being loved, being accepted, being successful, challenging oneself, competing with the others and being a champion (Short, 1995).

The decline in features such as delay in recovery of locomotor skills, delay of basic motion skills in gaining mature form, posture disorder, and deficiency in terms of physical fitness is observed in visually impaired individuals.

Positive effects of regular exercises on human health are indisputable. This positive effect enables the disabled individuals in the society to establish better relationships together with their physical developments (Fernhall, 1993).

The benefits of sport can also undoubtedly be witnessed in the individuals with a disability. We can list them as 1) development in physical fitness (strength, endurance, power, flexibility, agility), 2) decline in health problems (obesity, ischemic heart diseases, osteoporosis, diabetes, etc.) and 3) raising awareness in health. The main objective of disability sport is to enable the sport to be also applied by such persons in each level. For this purpose, it should be ensured that such persons should be enabled with doing sport irrespective of their disability level, ages, genders (Yılmaz, Tatar and Tiryaki, 2011).

Visually impaired football players are classified as B1, B2, and B3 according to their vision degrees. B1 class consists of the persons who are completely blind and B2 and B3 groups consist of the persons who are partially sighted or can see the light.

Each team in visually impaired football B1 (completely blind) is composed of 4 players and 1 sighted goalkeeper. Players act as to the sound of the ball in a game played with a football with a ring in it and direction of the ball is determined with the instructions given by the directing trainers behind the goal in each shooting ball position. There is no offside rule and the game is played during silence at all times.

The foundation of the game covers all motoric features such as strength, durability, flexibility, balance, speed, skill, timing and reaction speed and this is a sports branch where the players should hold these features.

This study aims to evaluate the physical fitness improvement after 8 weeks individual strength and conditioning program on B1 Turkish National Football Team, to reveal their motoric differences and to identify strengths and weaknesses of athletes.

2. Material and Methods

2.1. Research Group

11 male athletes (age ranging between 25,09 ± 3,53) in B1 Turkish National Football Team have participated in this study. Out of these athletes, 9 of whom account for B1

visually impaired football players (footballer) and 2 of whom account for a goalkeeper with no disability.

2.2. Data Collection Tools and Procedure Method

Detailed preliminary information has been provided to the athletes regarding the study and they have been asked not to exercise in high density within 48 hours before the tests. Motoric measurements of the athletes have conducted in favourable weather conditions and synthetic lawn pitch of Nevşehir Youth Services and Sports Provincial Directorate, Camp Training Center between 10:00 a.m. -12:00 a.m. of a day for an interval of 8 weeks. The athletes are qualified twice in motoric measurements and have been subjected to the optimum evaluation. Measurements have been conducted with the following protocols and order.

A. Grip strength (handgrip) Test

Dynamometer has been set according to hand size of each sport. (Baseline 12-0286, USA). Maximum grip strength has been measured firstly from the right hand and then left hand while athlete's hand is flat and that will create an angle with 10-15 degrees from shoulders from one side (Günay, Tamer and Cicioglu, 2013). Both measurements have been repeated twice for both hands and have been subjected to evaluation in the best degree kilogram type.

B. Auditory Reaction Test

The running track has been designated by marking it with 5 meters. SmartJump reaction mat has been placed behind the start line and SmartSpeed photocell gate has been placed to the finish line. (SmartJump, SmartSpeed, FusionSport, Australia). The athlete has placed his rear foot on the mat and his front foot on the start line in high speed running position. The athletes have been asked to run with maximal speed and pass 5 meters distance with auditory (sound) stimulus. The stimulus has randomly arrived in 1-4 seconds time interval. Measurement results have been recorded in seconds type for each athlete (Bayraktar et al, 2010).

C. 20 Meter Test Speed

The length of the running track has been designated as 20 m. A distance of minimum 10 meters has been reserved beyond the finish line as stop distance and safety of running track has been provided. Photocells have been placed at the start and 20 m finish line. (SmartSpeed, FusionSport, Australia). An assistant has been placed to the finish pint and has been asked to give directing instructions. The athlete has deployed with the help of an assistant in the back of 50cm of the start line. The athlete has been asked to start to run with all his strength and to pass the finish line within the shortest time possible.

D. Vertical jump and Anaerobic Strength Test

Measurement of body weight of the athletes has been performed before conducting the test. The athlete has been asked to perform a jump with his maximal upward strength by rapidly kneeling down while he is in open and vertical position with his feet in shoulder width (Özkan, Köklü and Ersöz, 2010). It has been stated that the athlete is required not to withdraw his feet to his stomach or hip while he is on the air during

jumping activity. The measurement has been performed by entering body weight of each athlete to SmartJump Mat. (SmartJump, FusionSport, Australia). The measurement results have been recorded in centimeters. It has been calculated by the following formula using anaerobic strength, body weight and vertical jumping distance. Anaerobic Strength ($kg.m.s^{-1}$)= 2.21 x (Body Weight) x √D D= Vertical Jumping Distance (m) (Özkan, Köklü and Ersöz, 2010).

E. Kneel Down Health Ball Throwing Test

The athlete has been placed in a fixed position with his knees open in shoulder width in kneeling down position with the help of an assistant just behind the start line where the measurement is to be conducted. He held the health ball with his both hands and took the back of his head. After slightly bending his body, he scattered her arms swiftly to the front and the ball has been removed from the hands at the farthest point from the top of his head (Bayraktar et al, 2010). Measurement has been conducted with three kilograms of health ball [10]. The measurement result is recorded in centimeters from the point where the health ball firstly contacts on the carpet meter.

F. Pro-Agility (Agility) Test

Pro-agility agility test area has been designated by placing signalmen to 5 yards (4.57 m) left and right of the start line. SmartSpeed photocell gate has been placed on the start line. (SmartSpeed, FusionSport, Australia). Repeated crossing times have been obtained in this way (Bayraktar, 2013). The athlete has stood in the start line with the help of an assistant before starting the application. The assistants with ring ball in their hands have been placed to the points marked in the right and left of the athlete. The athlete standing readily in the start line has been firstly asked to run and touch the right signal (sound) and to run and touch the left signal (sound) and then to run again to the right signal (sound). When the athlete is ready, the athlete has firstly touched the right signalman and then the left signalman and finished the test by passing from the start line. The total time has been recorded for each athlete.

G. Siting and Reaching (flexibility) Test

The sole of the athlete has been placed in fully stretched position in sitting position on the ground on the sitting and reaching stand. It has been reached out forwardly in a manner that both hands will overlap on the stand without bending the legs and the measurement has been recorded in centimeters by waiting for 2 seconds in the last point (Kamar, 2008).

H. Cooper Test

An assistant has been provided to each athlete and the athletes have been asked to run for 12 minutes. The athletes have by themselves designated their running tempos during the test and the assistants have helped them and the test has been finished. Each assistant has recorded the period of his own athlete and the distance run. The following formulation has been used for estimating maximum oxygen uptake from the total distance that the athletes have run at the end of the running period of 12 minutes. Estimated VO2max = Covered Distance– 504,9 / 44,73.

I. Strength and Conditioning Program

Strengths and weaknesses of the athletes after pre-test have been identified and each athlete has been individually provided with appropriate training intended for its purpose and sports branch and exercises for target have been performed. Strength and condition training has been applied for a period of 8 weeks and in 3 days a week.

"NASM OPT" Model has been used in the process of 8 weeks. (Phase-1- Stabilization, Phase-2- Strength Durability, Phase-3- Hypertrophy, Phase-4- Max Strength, Phase-5- Power)

1. Week: Stabilization (durability in stabilization);
2. Week: Strength continuity (1 RM 4-50%);
3. Week: Strength continuity (1 RM 4-50%);
4. Week: Hypertrophy (1 RM 65-85%);
5. Week: Hypertrophy (1 RM 65-85%);
6. Week: Max Strength (1 RM 90-100%);
7. Week: Max Strength (1 RM 90-100%);
8. Week: Power (1 RM 40-50%) Max blasting speed.

2.3. What Is the OPT Model?

The OPT model was conceptualized as a training program for a society that has more structural imbalances and susceptibility to injury than ever before. It is a process of programming that systematically progresses any client to any goal. The OPT model Figure… is built on a foundation of principles that progressively and systematically allows any client to achieve optimal levels of physiologic, physical, and performance adaptations, including:

A. Physiologic Benefits

- Improves cardiorespiratory efficiency;
- Enhances beneficial endocrine (hormone) and serum lipid (cholesterol) adaptations;
- Increases metabolic efficiency (metabolism);
- Increases bone density.

B. Physical Benefits

- Decreases body fat;
- Increases lean body mass (muscle);
- Increases tissue tensile strength (tendons, ligaments, muscles).

C. Performance Benefits

- Strength;
- Power;
- Endurance;
- Flexibility;
- Speed;
- Agility;
- Balance.

The OPT model is based on the scientific rationale of human movement science. Each stage has a designated purpose that provides the client with a systematic approach for progressing toward his or her individual goals, as well as addressing his or her specific needs. Now, more than ever, it is imperative that health and fitness professionals fully understand all components of programming as well as the right order in which those components must be addressed to help their clients achieve success.

1. **Week: Stabilization Endurance**

Goals:

- Improve muscular endurance;
- Enhance joint stability;
- Increase flexibility;
- Enhance control of posture;
- Improve neuromuscular efficiency (balance, stabilization, muscular coordination.

Training Strategies:

- Training in unstable, yet controllable environments (proprioceptively enriched);
- Low loads, high repetitions.

GOAL: TOTAL BODY **PHASE: 1 STABILIZATION ENDURANCE**

WARM-UP

Exercise:	Sets	Duration	Coaching Tip
SMR: Calves, IT-Band, Lats	1	30 s.	Hold each tender area for 30 sec
Static Stretch: Calves, Hip Flexors, Lats	1	30 s.	Hold each stretch for 30 sec
Treadmill	1	5–10 min	Brisk walk to slow jog

CORE / BALANCE / PLYOMETRIC

Exercise:	Sets	Reps	Tempo	Rest	Coaching Tip
Floor Bridge	2	12	Slow	0	
Floor Prone Cobra	2	12	Slow	0	
Single-Leg Balance Reach	2	12	Slow	0	
Squat Jump w/Stabilization	2	5	Slow	90 s.	Hold landing 3–5 seconds

SPEED, AGILITY, QUICKNESS

Exercise:	Sets	Reps	Rest	Coaching Tip
Optional				
Optional				

RESISTANCE

Exercise:		Sets	Reps	Tempo	Rest	Coaching Tip
Total Body	Ball Squat, Curl to Press	2	12	Slow	0	Vertical loading
Chest	Ball Dumbbell Chest Press	2	12	Slow	0	
Back	Standing Cable Row	2	12	Slow	0	
Shoulders	Single-Leg Dumbbell Scaption	2	12	Slow	0	
Biceps	Single-Leg Dumbbell Curl	2	12	Slow	0	
Triceps	Supine Ball Dumbbell Triceps Extensions	2	12	Slow	0	
Legs	Step-Up to Balance: Sagittal Plane	2	12	Slow	90 s.	

COOL-DOWN

Exercise:	Sets	Duration	Coaching Tip
Treadmill (optional)	1	5–10 min	Brisk walk; gradually reduce speed
SMR: Calves, IT-Band, Lats	1	30 s.	Hold each tender area for 30 sec
Static Stretch: Calves, Hip Flexors, Lats	1	30 s.	Hold each stretch for 30 sec

2. Week : Strength Endurance, (1 RM % 40-50)
3. Week : Strength Endurance, (1 RM % 40-50)

Goals:

- Improve stabilization endurance and increase prime mover strength;
- Improve overall work capacity;
- Enhance joint stabilization;
- Increase lean body mass.

Training Strategies:

- Moderate loads and repetitions (8–12);
- Superset: one traditional strength exercise and one stabilization exercise per body part in the resistance training portion of the program.

GOAL: TOTAL BODY **PHASE: 2 STRENGTH ENDURANCE**

WARM-UP

Exercise:	Sets	Duration	Coaching Tip
SMR: Calves, IT-Band, Lats	1	30 s.	Hold each tender area for 30 sec
Active Stretch: Calves, Hip Flexors, Lats	1	10 reps	Hold each stretch for 1–2 sec
Treadmill	1	5–10 min	Brisk walk to slow jog

CORE / BALANCE / PLYOMETRIC

Exercise:	Sets	Reps	Tempo	Rest	Coaching Tip
Ball Crunch	2	10	Medium	0	
Reverse Crunch	2	10	Medium	0	
Single-Leg Squat	2	10	Medium	0	
Squat Jump	2	10	Medium	60 s.	

SPEED, AGILITY, QUICKNESS

Exercise:	Sets	Reps	Rest	Coaching Tip
Optional				
Optional				

RESISTANCE

Exercise:		Sets	Reps	Tempo	Rest	Coaching Tip
Total Body	*Optional*					
Chest	Bench Press Push-Up	2	12 12	Medium Slow	0 60 s.	Superset
Back	Seated Cable Row Ball Dumbbell Row	2	12 12	Medium Slow	0 60 s.	Superset
Shoulders	Standing Dumbbell Should Press Single-Leg Scaption	2	12 12	Medium Slow	0 60 s.	Superset
Biceps	*Optional*					
Triceps	*Optional*					
Legs	Leg Press Step-Up to Balance	2	12 12	Medium Slow	0 60 s.	Superset

COOL-DOWN

Exercise:	Sets	Duration	Coaching Tip
Treadmill (optional)	1	5–10 min	Brisk walk
SMR: Calves, IT-Band, Lats	1	30 s.	Hold each tender area for 30 sec
Static Stretch: Calves, Hip Flexors, Lats	1	30 s.	Hold each stretch for 30 sec

Coaching Tips: Resistance program can be split into 2, 3, or 4-day workout routine. Ex. 3-day routine:
Day 1 (chest/back) Day 2 (legs) Day 3 (shoulders/biceps/triceps)

4. Week : Hypertrophy (1 RM % 65-85)
5. Week : Hypertrophy (1 RM % 65-85)

Goal:

- Achieve optimal levels of muscular hypertrophy (increase muscle size)

Training Strategies:

- High volume, moderate to high loads, moderate or low repetitions (6–12)

2.4. Data Analysis

After performing descriptive statistics (minimum, maximum, average and standard deviation) of all variables, *paired sample t-test* has been applied for determining whether or not there is a difference between pre-test and post-test and a significance level of 0.05 has been taken into consideration. All statistical analyses have been conducted by using SPSS 13.0 packet program.

3. Results

Table 1: Pre-test and post-test descriptive statistics values and t-test results pertaining to motoric measurements of B1 football national team football players

	Pre-Test (n= 9)			**Post-Test (n= 9)**			
Variables	**Min**	**Max.**	**Average ± Sd**	**Min**	**Max.**	**Average ± Sd**	**P**
Vertical jump (cm)	26,74	47.90	34,76 ± 5,71	32,65	50.23	37,54 ± 5,03	0,13
Health Ball Throwing (cm)	250,00	600.00	479,44 ± 102,51	225,00	650.00	502,78 ± 124,65	0,29
Sitting and Reaching (cm)	17,30	35.80	26,91 ± 5,89	17,00	37.00	29,89 ± 6,94	0,15
20 m Speed (sec)	3,10	3.98	3,38 ± 0,28	2,97	3.47	3,24 ± 0,14	0.03*
Auditory Reaction (sn)	0,33	0.83	0,63 ± 0,14	0,10	0.75	0,56 ± 0,22	0,19
Grip Strength (Right Hand)	25,20	61.90	42,17 ± 10,82	31,80	68.70	43,66 ± 10,75	0,37
Grip Strength (Left Hand)	22,50	57.60	39,79 ± 11,58	27,90	62.70	40,79 ± 12,2	0,41
Agility (cm)	5,21	5.77	5,54 ± 0,2	4,86	5.51	5,29 ± 0,26	0.03*
Anaerobic Strength	67,08	100.02	89,56 ± 9,96	75,64	105.70	94,5 ± 8,7	0.03*
Max Vo^2	26,27	45.72	33,13 ± 5,74	36,64	41.14	38,31 ± 1,67	0.02*

*p<0,05

No significant difference has been found out between pre-test and post-test statistical values in the variables as shown in Table 2. (p>0,05).

Table 2: Pre-test and post-test descriptive statistics values and t-test results pertaining to motoric measurements of B1 football national team goalkeepers.

	Pre-Test (n = 2)			**Post-Test (n= 2)**			
Variables	**Min**	**Max.**	**Average ± Sd**	**Min**	**Max.**	**Average ± Sd**	**P**
Vertical jump (cm)	33,16	33.29	33,23 ± 0,09	31,41	33.29	32,35 ± 1,33	0,25
Health Ball Throwing (cm)	620,00	675.00	647,5 ± 38,89	675,00	700.00	687,5 ± 17,68	0,11
Sitting and Reaching (cm)	26,10	42.40	34,25 ± 11,53	29,00	37.00	33 ± 5,66	0,47
20 m Speed (sec)	3,09	3.10	3,1 ± 0,01	3,08	3.16	3,12 ± 0,05	0,30
Auditory Reaction (sn)	0,58	0.65	0,61 ± 0,05	0,54	0.54	0,54 ± 0	0,12
Grip Strength (Right Hand)	41,10	53.40	47,25 ± 8,7	42,50	59.60	51,05 ± 12,09	0,42
Grip Strength (Left Hand)	44,80	52.70	48,75 ± 5,59	45,80	53.00	49,4 ± 5,09	0,47
Agility (cm)	5,07	5.30	5,18 ± 0,17	4,32	4.55	4,43 ± 0,16	0,09
Anaerobic Strength	90,48	106.60	98,54 ± 11,4	98,06	105.28	101,67 ± 5,11	0,42
Max Vo^2	42,37	48.40	45,39 ± 4,27	40,39	41.14	40,76 ± 0,53	0,20

*p<0,05

4. Discussion and Conclusion

An improvement has been observed between pre and post values of upper and lower extremities strength, flexibility, speed, auditory reaction, grip strength, right-left hand, agility, anaerobic strength and maximum oxygen capacity. (Table 1).

A significant difference has not been found in overall performance parameters of B1 football national team goalkeepers. An improvement has been observed in upper extremity strength, auditory reaction, right and left-hand grip strength, agility and anaerobic strength parameters. (Table 2).

It can be stated that indifference of the goalkeepers to training and lack of competition environment have an adverse effect on the overall performance level.
No significant difference has been found out by considering the pre-test 34,76 ± 5,71 and post-test 37,54 ± 5,03 results regarding vertical jump average values ($p>0,05$). Çalışkan et al., (t.y) in the study conducted on B1 visually impaired individuals, considering vertical jump of the students of goalball, motion training and control group, although there has been a significant increase in goalball and motion training groups, no significant improvement has been observed in the control group. In the study conducted, an improvement in positive level has been observed although there is no significant difference between pre-test and post-test in the study conducted.

In the study conducted, no significant difference has been found out by considering the pre-test 479,44 ± 102,51 and post-test 502,78 ± 124,65 results regarding health ball throwing average values ($p>0,05$). An improvement has been observed in upper extremity strength parameters as a result of the 8 weeks of anaerobic training in the study conducted.

In this study conducted, no significant difference has been found out by considering the pre-test 26,91 ± 5,89 and post-test 29,89 ± 6,94 results regarding sitting and reaching average values ($p>0,05$). In this study conducted, an improvement has been observed in movement spans of the athletes in the process of 8 weeks with the dynamic stretching before the training and static stretching exercises after the training.

In the study conducted, pre-test and post-test values of visually impaired football players participating in the study in 20 meters speed parameter have been respectively determined as 3,38 ± 0,28 and 3,24 ± 0,14 ($p<0,05$). When the literature has been investigated, Savucu et al., (2006) have stated that there is a significant difference in 20m running parameters of regular basketball exercises performed by disabled athletes (Savucu et al., 2006). In 2013, Aslan found out the average values in 10 m. sprint test as 2,26 ± 0,15 and the average values in 30 m sprint test as 5,02 ± 0,25 in the study called physical and physiological features of Turkey National Football Team of B1 visually impaired football players (Aslan, 2013). In the study called an evaluation of the effects of goalball and motion training on the physical fitness of visually impaired children conducted by Çalışkan et al., (2016), 20-meter speed pre-test and post-test results of goalball have been respectively determined as (5,45 ± 0,95) and (4,86 ± 0,86). Found results are of a nature that substantiates our study.

No significant difference has been found out by considering the pre-test 0,63 ± 0,14 and post-test 0,56 ± 0,22 results regarding auditory reaction average values (p>0,05). A significant difference has been found in auditory reactional test applied in the study conducted by Çalışkan et al., (t.y.) to the visually impaired athletes. In this study conducted, no significant difference has been found out although all their perceptions are auditory in auditory reaction parameter. However, an improvement has been observed between the pre-test and post-test in this process of 8 weeks.

No significant difference has been found out by considering the fact that grip strength average values indicate that right-hand pre-test is 42,17 ± 10,82 and post-test is 43,66 ± 10,75 and left-hand pre-test is 39,79 ± 11,58 and post-test is 40,79 ± 12,2. Aslan (2013) found out that hand grip strength of Turkey National Football Team of B1 visually impaired football players was lower when compared with the similar study results conducted with amateur football players. No significant difference has been found out although there is an improvement between pre-test and post-test in this study conducted. Çalışkan et al., (2016) has supported that the visually impaired individuals have thinner motor manipulation and grip strength is not sufficient.

In the study conducted, pre-test and post-test results of the athletes given the agility performance of the athletes have been respectively determined as 5,54 ± 0,2 and 5,29 ± 0,26 (p<0,05). An improvement in significant level has been observed between pre-test and post-test as a result of the training applied during 8 weeks.

In the study conducted, anaerobic strength pre-test and post-test values of the athletes have been respectively determined as 89,56 ± 9,96 and 94,5 ± 8,7 (p<0,05). In 2013, Aslan found out that the anaerobic strength average values as 104,56 ± 20,46 in the study called physical and physiological features of Turkey National Football Team of B1 visually impaired football players. In the study conducted by Çalışkan et al., (2016), no significant difference has been found out by considering the fact that anaerobic strength pre-test is 30,51 ± 6,19 and post-test is 32,61 ± 6,73. In this study conducted, it is contemplated that obtaining different results than the literature has affected lifestyles of the athletes, their social and economic situations, exercise levels and 8 weeks individual strength and condition program.

In the study conducted, a significant difference has been found out considering the fact that pre-test and post-test results of the athlete's maximal oxygen capacity values of the athletes have been respectively determined as 33,13 ± 5,74 and 38,31 ± 1,67 (p<0,05). In 2013, Aslan found out the Max Vo^2 average values as 48,33 ± 4,11 in the study called physical and physiological features of Turkey National Football Team of B1 visually impaired football players. In the study conducted by Çalışkan et al., (2016) for investigating the effects of goalball sport on B1, B2, B3 visually impaired athletes, Max Vo^2 average values have been respectively found out as (24,43 ± 4,69) and (26,89 ± 4,11). The found results exhibit parallelism with this study.

An improvement in positive level has been observed in overall performance parameters of B1 football national team athletes and with 8 weeks of strength and condition training.

The result of motoric tests should identify strengths and weaknesses of the athletes and strengths of the athlete should be kept in balance with individually tailored training and weaknesses should be intensified and individually tailored training systems should be used for improving this process.

During training, planning should be performed by addressing motoric demands of the athletes required by their branches.

Test results of the athletes should be evaluated with national and international norms specific to their own branches and age groups.

Anthropometric and motoric tests should be repeated with the interval of 6 to 8 weeks. No significant difference has been found out in vertical jumping (low extremity strength), health ball throwing (upper extremity strength), sitting and reaching (flexibility), auditory reaction and grip strength right-left hand parameters of B1 football national team players (football players). These exercises should be intensified in individual training programs of the players for enhancing their such features.

Raising interest of B1 football national team goalkeepers to the training and creating a competitive environment could prove useful in increasing overall performance levels.

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