

# Determining the influence of dynamic balance in the technical training in football game at U13 level

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## Abstract

**Background and Study Aim** Technical training in football plays an important part in scoring goals. Precise movements can become the key to victory in a match. Among the principal factors determining the accuracy of shooting or kicking the ball is balance. The study aims to determine the influence of dynamic balance on technical training in U13 football.

**Material and Methods** A group of 26 football players from Otopeni Sports Club (Romania), aged 12-13 years, in the U13 category, participated in this study. Dynamic balance was assessed using the Sensamove MiniBoard platform with tests including: Lateral bipedal balance (LBB), Vertical bipedal balance (VBB), and Vertical unipedal balance for both right (VBRL) and left (VBLL) legs. Technical training was evaluated using tests recommended by the Romanian Football Federation: instep kick from 9 m (Test 1, points), outside kick in 30 sec. (Test 2, points), and 20 m long pass (Test 3, points). Pearson's correlation coefficient was used to analyze the relationship between dynamic balance (lateral and vertical bipedal, and vertical unipedal for both legs) and technical training in U13 footballers.

**Results** The analysis of the comparative results between LBB and VBB variables reveals better performances by 9.2% at VBB. There are lower values of the vertical deviations mean by 2.9 degrees forward at LBB and by -2.8 degrees backward. The mean of lateral deviations is lower by -2.7 degrees to the left at VBB and by 3.3 degrees to the right. The comparative results between VBRL and VBLL variables show better performances by 0.3% at VBRL. The values of the vertical deviations mean are lower by 0.5 degrees forward at VBRL and 0.3 degrees backward. The mean of the lateral deviations (left-right) have equal values. Analyzing the performances obtained in technical tests highlights 22.2% (estimated maximum score) at instep kick, 62.5% (individual maximum value) at outside kick and 34.5% (estimated maximum value) at 20 m long pass. The influence of dynamic balance on technical training shows 60.7% positive connections and 39.3% negative ones between LBB and VBB variables. As for VBRL and VBLL variables, there are 67.9% positive connections and 32.1% negative connections between them.

**Conclusions** The weighting of values at performance and maintaining in space was highlighted. The mean of front-back and left-right deviations in bipedal and unipedal balance has lower values. The technical performances obtained were compared with the estimated maximum score and the individual maximum value. An increased number of positive connections to balance performance variables and of negative connections to the mean of deviations was noticed. This fact contributed to determining the degree of influence on the investigated variables. The findings can serve as a recommendation for future research.

**Keywords:** bipedal balance, unipedal balance, performance, deviation, precision, movement, young, football players

## Introduction

One of the most popular team sports around the

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world is football. All people can enjoy football, starting from children, youth and even parents. During a match, players perform different acyclic movements at different intensities to cope with the complex and dynamic requirements of the competition [1, 2].

Small-sided games (SSG) are a valuable tool for coaches. They help to promote the acquisition of individual and collective behaviors of players for improving overall team performance. It is necessary to compare the technical-tactical knowledge of young footballers in different playing positions during SSG. In this way coaches and players can better understand and predict the actions of each player throughout the game [1, 3]. Identifying how collective tactical behavior varies with age in different playing formats of SSG is also necessary. It can be a useful measure regarding tactical performance in youth football [4, 5]. Many of the actions that take place in football combine a movement (at higher or lower speed) with a jump [6, 7, 8]. SSGs also help to assess skills and talent, as well as to highlight current issues that can guide future efforts [9, 10, 11, 12].

Football is a sport that requires a multitude of technical skills, as well as static, semi-dynamic and dynamic balance. Ball hitting technique or shooting at goal is really important in scoring goals; it can be the key to victory. Balance is one of the main factors in determining the accuracy of ball hitting or shooting. Previous studies made a comparison between plyometric training performed on stable surfaces and the one on unstable surfaces [13, 14, 15]. There were highlighted the effects of these types of training on the components of physical fitness in children and adolescents. Depending on the training modality, specific performance improvements for jumps (stable) and balance (unstable) were identified [16, 17, 18].

Although regularly performed classic football training develops skills, differentiated learning exercises integrated into training programs are more effective for dribbling [19]. Technical skills (first touch, ball kicking, one to one and playing under pressure) are determining aspects in developing youth players. The best ways of implementing the technical training programs for youth must be evaluated for continuous success in football [20]. Dribbling is quite a dominant technique in football training, especially at a young age. Dribbling can be classified into dribbling actions with acceleration and dribbling actions with rapid changes of direction [21]. Physical and technical performance of the player in terms of making successful passes increases as the age increases [22].

The identification of football talent is complex and requires a multiple approach. This one is based on the knowledge of anthropometric, physiological, neuro-motor, cognitive-perceptual and psychosocial variables. In most previous studies, the prognosis confirmation regarding very early talents focused on the later stages of U12 and U15 [11, 23, 24, 25].

The specifics of how excellence is achieved in elite football was repeatedly investigated by many

specialists through various approaches. A growing number of studies analyze tactical behaviors in football, based on the collective movements of teammates. Key-indicators are identified in team sports (such as football, basketball and rugby). Methodological issues related to jump training (plyometric) in football players with different fitness levels are studied [26, 27, 28]. The technical and tactical skills of footballers, as well as their anthropometrical and physiological characteristics are monitored according to age. The advantages of the global approach compared to the analytical approach in acquiring and developing technical skills were analyzed. The integration of physical and tactical variables in football was also studied, using positional data [20, 29, 30, 31].

Currently, an almost routine practice is to include balance exercises in the training programs for athletes in various sports. Most balance research focused on the effects of balance training programs on physical performance and injury prevention. Football is considered a sport using a single leg dominantly and balance skills are really necessary during the game. It involves the performance of multiple actions in a one-legged stance, such as kicking, making a pass and dribbling. The ability to maintain a stable balance position on one leg during fast movements of direction change is fundamental. A good level of agility (both running and reactive) requires speed, dynamic balance, dynamic strength and coordination skills as well [8, 9, 32, 33].

Present trends in attacking strategies and increased workload in modern football entailed the need for fast and well-trained athletes. Obvious improvements in speed, coordination, strength and endurance were observed in elite youth players too [34]. However, there are few studies on the effect of basic training in the development of motor performances in U13 footballers [35].

*Purpose of the Study.* The study purpose was to determine the dynamic balance influence on technical training in football game at U13 level.

## Materials and Methods

### *Participants*

A group of 26 football players participated in this study (U13, mean age  $11.69 \pm 0.8$  years, height  $151.7 \pm 6.7$  cm, weight  $40.9 \pm 7.3$  kg and BMI  $17.7$  kg/m<sup>2</sup>). The participants were selected from the U13 group of the Otopeni Sports Club, Ilfov County, Romania. The consent of the parents was required and signed before starting the research according to the Declaration of Helsinki. It was approved by the Ethics Committee of the Doctoral School of Physical Education and Sport Science (ID: 03/22.07.2023), University of Pitesti, Romania.

### *Research Design*

The research was conducted in February 2023,

for highlighting the influence of dynamic balance upon technical training in U13 football.

In that regard, the Sensamove MiniBoard platform (Nederland) was used to determine the dynamic balance. The tilting angle was 10 degrees and the balance had to be maintained for 16 sec. Tests used:

- a) Lateral and vertical bipedal balance. Parameters used: performance (%), for lateral balance front, inside (%), back, inside (%). For vertical balance left, inside (%), right, inside (%), front, avg. dev. (degree), back, avg. dev. (degree), left, avg. dev. (degree), right, avg. dev. (degree).
- b) Vertical unipedal balance (right and left leg). Parameters used: performance (%), left, inside (%), right, inside (%), front, avg. dev. (degree), back, avg. dev. (degree), left, avg. dev. (degree), right, avg. dev. (degree)

To evaluate the level of technical training, tests recommended by the FRF and selected were used as follows:

*Test 1 – instep kick* from the distance of 9 m. Players had 5 attempts. Shots are done with balls of the same size. The ball must enter the goal in the air (direct aerial trajectory). Players are scored according to the areas marked in the goal: 10 points top left / right; 5 points bottom right/ left; 3 points top center and 1 point bottom center. Estimated maximum score = 50 points. If the junior players hit the ball with other part of the leg or the ball touches the ground before entering the goal, the attempt is not taken into account (failed).

*Test 2 – outside kick.* A 5 / 10 m rectangle is drawn. A gym bench is placed upside down on the 10 m side. The player kicks the ball successively for 30 sec. (outside kicks). The ball is kicked on the 5 m line. If the ball goes over the bench and stops in the net, the player can use the spare ball. If this ball too reaches the goal, the player must recover it and continue the exercise from 5 m line. The player has the right to only one spare ball. The ball can be kicked directly or with taking-over, depending on the abilities of the individual. The number of times the ball hits the bench during 30 sec. is counted. Each player has the right to one attempt and the obtained result is multiplied by 3 points.

*Test 3 - long pass.* The player is at a distance of 20 m from the square made of cones (5x5 m). From this spot, he will make a long pass by instep kick. The ball must have an aerial trajectory until it touches the ground in the marked area. The player has the right to one warm-up attempt and 3 evaluation attempts; each success is marked with 20 points. Estimated maximum value = 60 points.

#### *Statistical Analysis*

The statistical indicators were calculated using the KyPlot 6.0 (©1997-2020, KyensLab Inc) program, in terms of mean, standard deviation (SD), coefficient

of variation (CV%), Confidence Level of Mean (0.95) and Confidence Limit of Mean. Pearson's correlation coefficient was applied to evaluate the relationship between dynamic (lateral and vertical) bipedal and vertical unipedal (left and right) balance by technical training of the U13 footballers. Statistical significance was set at  $p < 0.05$ .

## **Results**

The results of the specific motor skills in bipedal and unipedal balance are listed in the tables 1 and 2.

The results of the comparative analysis between the variables of lateral balance (LBB) and vertical balance (VBB) show better performances at VBB by 9.2%, maintaining inside the space by 7.5% between front and left inside and 1.9% between back and right inside. The mean of vertical deviations has lower values at LBB by 2.9 degrees forward and by -2.8 degrees back. The mean of lateral deviations has lower values at VBB by -2.7 degrees to the left and 3.3 degrees to the right. Comparing the Confidence Limit of Mean of the deviations between LBB and VBB, a lower deviation by 0.5 degrees is noticed at VBB. This fact justifies the better vertical balance performance.

The results of the comparative analysis between the variables of right leg vertical balance (VBRL) and left leg vertical balance (VBLL) highlight better performances by 0.3% at VBRL, keeping inside the space by 0.3% left inside at VBLL and 0.8% right inside at VBRL. The mean of vertical deviations has lower values at VBRL by 0.5 degrees forward and 0.3 degrees back. The mean of lateral deviations has equal values both to the left and to the right. Comparing the Confidence Limit of Mean of the deviations between VBRL and VBLL, one can observe a lower deviation by 0.3 degrees at VBRL. Thus, the balance on the right leg has better performance.

The results regarding the technical training of the U13 footballers ( $n=26$ ) are shown in table 3. The scores obtained in each test are highlighted, according to the requirements recommended by the FRF and adapted by us.

The analysis of the performances obtained in *Test 1*, regarding the ball instep kick from 9 m, reveals the total score achieved in the 5 attempts performed. The estimated maximum score highlights a mean of the group of 22.2%. The Confidence Limit of Mean ranges from 16.3% below mean and 15.3% above mean. *Test 2* presents the ball outside kick from a distance of 10 m in 30 sec. The results of the score reveal a mean of 62.5% (individual maximum value of 48 points) and the Confidence Limit of Mean between 11.7% below and above the mean. *Test 3* deals with the 20 m long pass. It has a mean of 34.5% of the estimated maximum value and the Confidence Limit of Mean between 35.3% under mean and 35.7% above mean. Total level training highlights the score obtained

**Table 1.** Results of the specific motor skills in the bipedal lateral and vertical balance at U13 level (n=26)

Tests	Variables	mean ± SD	CV (%)	Confidence Level of Mean (0.95)	Confidence Limit of Mean	
					Lower	Upper
LBB	performance (%)	64.3 ± 14.9	23.1	6.00	58.3	70.3
	front, inside (%)	32.5 ± 10.1	31.0	4.1	28.5	36.6
	back, inside (%)	31.6 ± 11.9	37.8	4.8	26.7	36.4
	front, avg. dev. (degree)	1.91 ± 0.7	35.4	0.27	1.6	2.2
	back, avg. dev. (degree)	-2.4 ± 0.9	-37.0	0.4	-2.7	-2.0
	left, avg. dev. (degree)	-4.6 ± 1.3	-28.8	0.5	-5.1	-4.0
	right, avg. dev. (degree)	5.1 ± 1.6	32.0	0.7	4.4	5.7
VBB	performance (%)	73.5 ± 13.2	17.9	5.3	68.2	78.8
	left, inside (%)	40.0 ± 11.5	28.7	4.6	35.4	44.7
	right, inside (%)	33.5 ± 8.2	24.4	3.3	30.2	36.7
	front, avg. dev. (degree)	4.8 ± 1.1	22.0	0.4	4.3	5.2
	back, avg. dev. (degree)	-5.2 ± 1.5	-29.6	0.6	-5.8	-4.6
	left, avg. dev. (degree)	-1.9 ± 0.7	-36.4	0.3	-2.1	-1.6
	right, avg. dev. (degree)	1.8 ± 0.7	35.4	0.3	1.6	2.2

Note. Values are expressed as means ± standard deviations (SD), CV% – coefficient of variation, avg. – mean, dev. – deviation; LBB - Lateral bipedal balance; VBB - Vertical bipedal balance

**Table 2.** Results the specific motor skills in the unipedal vertical balance of the U13 footballers (n=26)

Tests	Variables	mean ± SD	CV (%)	Confidence Level of Mean (0.95)	Confidence Limit of Mean	
					Lower	Upper
VBRL	performance (%)	84.0 ± 13.9	16.5	5.6	78.4	89.6
	left, inside (%)	41.5 ± 16.4	39.4	6.6	34.9	48.1
	right, inside (%)	42.5 ± 16.4	38.5	6.6	35.9	49.1
	front, avg. dev. (degree)	4.9 ± 1.0	20.3	0.4	4.6	5.4
	back, avg. dev. (degree)	-5.4 ± 1.4	-24.8	0.5	-5.9	-4.9
	left, avg. dev. (degree)	-1.3 ± 0.7	-53.3	0.3	-1.5	-0.9
	right, avg. dev. (degree)	1.2 ± 0.4	34.3	0.2	1.0	1.4
VBLL	performance (%)	83.7 ± 14.0	16.7	5.6	78.1	89.4
	left, inside (%)	41.8 ± 14.1	33.7	5.7	36.1	47.5
	right, inside (%)	41.7 ± 17.2	41.3	6.9	34.7	48.6
	front, avg. dev. (degree)	5.4 ± 1.3	23.5	0.5	4.9	5.9
	back, avg. dev. (degree)	-5.7 ± 1.5	-27.1	0.6	-6.3	-5.1
	left, avg. dev. (degree)	-1.3 ± 0.5	-42.4	0.2	-1.5	-1.1
	right, avg. dev. (degree)	1.2 ± 0.5	44.0	0.2	0.9	1.4

Note. Values are expressed as means ± standard deviations (SD), CV% – coefficient of variation, avg. – mean, dev. – deviation; VBRL - Vertical balance right leg; VBLL - Vertical balance left leg

following the three tests, with a mean of 49.1% of the individual maximum value achieved (126 points). The Confidence Limit of Mean is between 18.5% under mean and 18.4% above mean. From the comparison of the Confidence Limit of Mean, a variation of the range from 15 to 35% under and above the mean is observed.

A Pearson linear correlation analysis was performed for determining the influence of dynamic

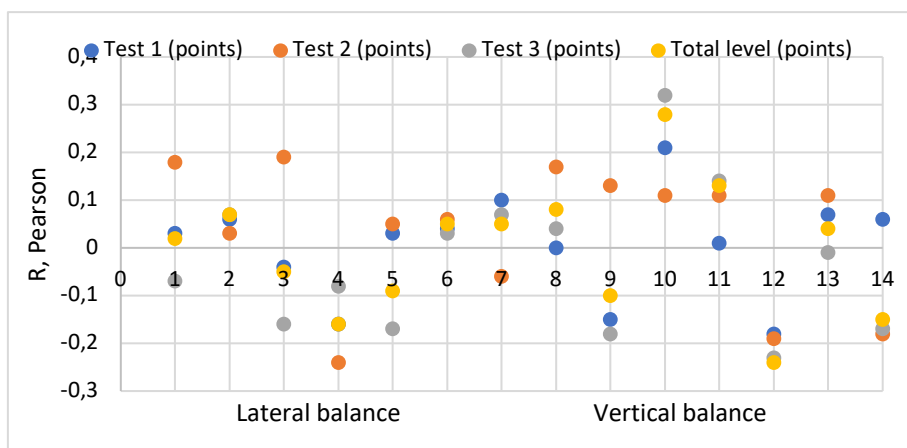
balance on technical training at U13 level. It is shown in figures 1 and 2.

The correlation analysis between the variables of bipedal dynamic balance (lateral and vertical) and technical training highlight 60.7% positive connections and 39.3% negative connections (fig. 1). Regarding the relation between performance and maintaining inside the space (front and back inside) at LBB and the technical training level, one

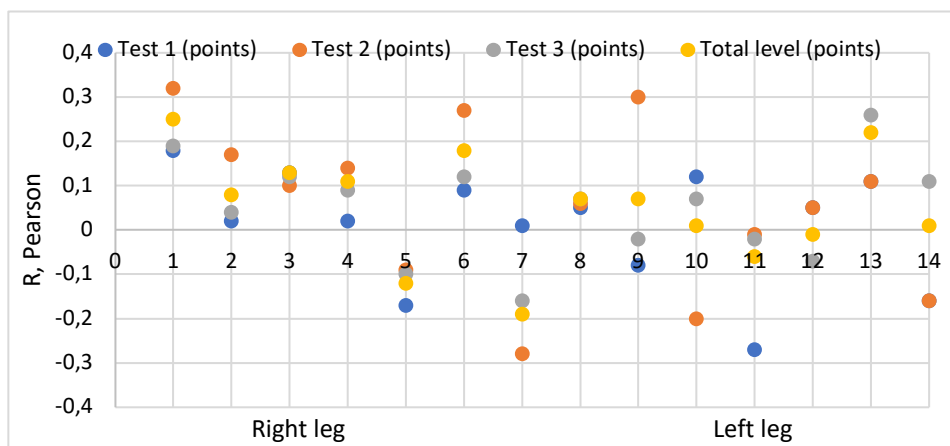
**Table 3.** Results of the technical training of the athletes in football game at U13 level (n=26)

Tests	Variables	mean ± SD	CV (%)	Confidence Level of Mean (0.95)	Confidence Limit of Mean	
					Lower	Upper
Test 1	total 5 exec. (pts)	11.1 ± 2.4	39.7	1.8	9.3	12.8
Test 2	exec. 30 sec (pts)	30.0 ± 8.8	29.4	3.6	26.5	33.6
Test 3	total 3 exec. (pts)	20.7 ± 18.3	88.2	7.4	13.4	28.1
Total level training (pts)		61.9 ± 28.2	45.5	11.4	50.5	73.3

Notes. Values are expressed as means ± standard deviations (SD), CV% – coefficient of variation, avg. – mean, dev. – deviation; pts – points



**Figure 1.** Correlation between dynamic bipedal balance and technical training of the athletes in football game at U13 level (n=26). Note: Lateral bipedal balance indices: 1 - performance (%), 2 - front, inside (%), 3 - back, inside (%), 4 - front, avg. dev. (degree), 5 - back, avg. dev. (degree), 6 - left, avg. dev. (degree), 7 - right, avg. dev. (degree); Vertical Bipedal balance indices: 8 - performance (%), 9 - front, inside (%), 10 - back, inside (%), 11 - front, avg. dev. (degree), 12 - back, avg. dev. (degree), 13 - left, avg. dev. (degree), 14 - right, avg. dev. (degree).



**Figure 2.** Correlation between vertical unipedal balance and technical actions of the athletes in football game at U13 level (n=26). Note: Right leg vertical balance indices: 1 - performance (%), 2 - left, inside (%), 3 - right, inside (%), 4 - front, avg. dev. (degree), 5 - back, avg. dev. (degree), 6 - left, avg. dev. (degree), 7 - right, avg. dev. (degree); Left leg vertical balance indices: 8 - performance (%), 9 - left, inside (%), 10 - right, inside (%), 11 - front, avg. dev. (degree), 12 - back, avg. dev. (degree), 13 - left, avg. dev. (degree), 14 - right, avg. dev. (degree).

can observe 66.7% positive influence and 43.75% negative influence upon the mean of the front-back and left-right deviations. The relation between performance and keeping inside the space (left

and right inside) at VBB and the level of technical training highlights 75% positive influence and 50% negative influence on the mean of the front-back and left-right deviations. The comparison of the

relations between the analyzed variables reveals a better influence at VBB.

The results of the correlation analysis between the variables of the unipedal dynamic balance (right and left leg) and the technical training show 67.9% positive connections and 32.1% negative connections (fig. 2). As for the relation between performance and keeping inside the space (left and right inside) at VBRL and the technical training level, the following aspects are found out. There is a full positive influence and 43.75% negative influence on the mean of the front-back and left-right deviations. The relation between performance and maintaining inside space (left and right inside) at VBLL and the technical training level reveals 75% positive influence and 50% negative influence on the mean of the front-back and left-right deviations. By comparing the relations of the analyzed variables, it shall be noticed a better influence in VBRL at performance. It is also observed a better influence (by 6.25%) at the mean of deviations in VBLL.

Related to the comparison of the relations between the variables of the bipedal and unipedal balance with the technical training level, the following observations are made. There are better performances and maintaining inside the space through positive connections at VBB and VBRL. There are also negative connections (better ones) both at VBB and VBLL. Even if these connections are insignificant, the sense of the relations (positive or negative ones) determines the level of influence of the variables on their performance.

## Discussion

The study aimed at determining the influence of dynamic balance on the technical training in football game at U13, before the development of a training program. In this sense, two tests were used for evaluating the bipedal balance (lateral and vertical) and the unipedal vertical balance on both right and left foot.

The analysis of the comparative results between the LBB and VBB variables highlights better performances by 9.2% in VBB. There are lower values of the mean of vertical deviations forward and backward at LBB. The mean of the left and right deviations at VBB is also shown (Table 1). Comparative results between the VBRL and VBLL variables reveal better performances by 0.3% at VBRL. There are lower values of the mean of front and back deviations at VBRL and equal values of the mean of left and right deviations at both legs (Table 2).

In the specialized literature, dynamic balance performance (DBP) is the ability to maintain adequate postural control. For example, knee stability should be perfect while standing on one leg and performing a specific action with the other leg, such as shooting the ball [36]. Significant main

effects related to balance performance and age have been already highlighted in previous studies. DBP and postural control of the dominant leg showed a significant positive correlation with age in young football players [17, 37]. Other studies highlighted that proper balance ability could lead to higher speed in the case of the younger football players [17, 36, 38]. On the other hand, dynamic balance stability failed to differentiate between faster and slower team athletes [39]. The statistical analysis also shows that balance has a significant contribution to the accuracy of shooting at goal in football. Thus, dynamic balance effectively contributes at 24.28%. These results prove that dynamic balance has almost as much contribution as the variables of leg muscles strength [13]. The plyometric training effects using stable/unstable surfaces were examined in the case of prepubertal footballers as for their physical performance. After 8 weeks of training, similar levels of performance were observed regarding jumping ability, speed, dynamic balance and agility [18]. The associations between multidirectional speed performance, dynamic balance performance and chronological age were also studied in the young football players. The tests used for this purpose could be useful screening tools for detecting performance deficits and implementing preventive training programs [33].

Many studies aimed to demonstrate that Small Sided Games (SSG) is an effective method for developing the ability to repeat sprints. This training program improves recovery capacity before high intensity efforts in young football players. Also, it allows to work on technical and tactical elements and to develop the physical profile of the players. SSGs are widely used to replicate certain technical, tactical or physiological responses. Some constraints were applied to ensure that kicking is given special attention [7, 8]. Relationships between physical and performance characteristics and the skill level were determined in the football players aged 12-16 years. The analyzes highlighted that elite players had better scores than non-elite players regarding strength, flexibility, speed, aerobic endurance and anaerobic capacity [25]. The relative contributions of body size, skeletal age and motor performance variables in young players were also studied during SSGs. The interaction of biological maturation with technical and motor performance was monitored as well. However, as in most other sports, in youth football too the predictive value of such findings is still unclear. Therefore, some specialists evaluated the medium-term prognostic validity of generic motor performance tests [10, 12]. The effects of a differentiated learning program included in SSGs on the creative and tactical behaviour of footballers were identified. This program has been found to have clear effects, demonstrating greater improvements in U13 football players compared to U15 category

[22].

A Pearson linear correlation analysis was performed to determine the influence of dynamic balance on technical training. The results show 60.7% positive connections and 39.3% negative connections between LBB and VBB variables. There are also 67.9% positive connections and 32.1% negative connections between negative connections between VBRL and VBLL variables. Pearson correlation and hierarchical multiple regression were performed to explore the relation between variables in the analysis of balance performance. There were examined the relation between the age of players, body composition, balance and other fitness parameters (strength and flexibility). Generally, no substantial relationship was found between the static and dynamic balance variables. Therefore, it is essential to include both as complementary measures while evaluating the postural balance of young football players [34]. Dribbling ability was carefully studied as well. It is influenced by several factors such as agility, leg-eye coordination and balance. Based on the results, it was recommended that these factors be specially trained. The purpose is to improve dribbling skills of young football players, mainly the 9-12 age group [21]. Another aspect studied by specialists was the goal scoring method: line goal, double goal or central goal. The age-related effects on the defensive performance of U13 football players were also monitored. The moments of ball possession regaining were analyzed using several variables. These variables are: type of ball recovery; sector of ball recovery; configuration of the game; defense status [6].

## Conclusions

The comparative analysis between LBB and VBB variables highlights the share of better performances at VBB. In terms of maintaining inside the space, the comparison was made between front and left inside and between back and right inside. Lower values were observed as for the mean of vertical deviations at LBB forward and backward. The mean of lateral deviations has lower values at VBB to the left and also to the right. The comparison of Confidence Limit of Mean of deviations reveals a smaller deviation at

VBB. This one justifies the better performance at vertical balance.

The results of the comparative analysis between lateral balance variables – right leg (VBRL) and left leg (VBLL) reveal better performances at VBRL, keeping inside the space left inside at VBLL and right inside at VBRL. The mean of vertical deviations shows lower values at VBRL, front and back. The mean of lateral deviations has equal values to the left and to the right. Making a comparison of the Confidence Limit of Mean of the deviations, one can observe a smaller deviation at VBRL. Therefore, the better performance of VBRL is justified.

The analysis of performances in technical training evaluation highlights the total score recorded at ball instep kick and long pass. This score was compared with the estimated maximum score, the weight of the mean at outside kick in 30 sec. and the total level training related to the individual maximum value achieved.

The comparison of the relations between the variables of bipedal and unipedal balance with the level of technical training in U13 football players reveals performances. Concerning the maintaining inside the space, there are better positive connections at VBB and VBRL, while the negative connections (better effect) are present at both VBB and VBLL. Even if these connections are statistically insignificant, the sense of the relations (positive or negative) determines the influence of the variables on their performance.

These data can serve as recommendations in future studies intended to develop and implement an experimental program. The purpose of this program is the improvement of balance and technical training as well.

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## Conflict of interest

There are no conflicts of interest to declare.

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