

MOTOR SKILLS AND THEIR ROLE IN THE COMPLEX MOVEMENT PREPARATION OF NOVICE INDIVIDUALS

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Abstract:

The focus of this study is the development of movement skills in organized sports and recreational physical activity, intending to accelerate and significantly improving physical movement abilities, especially for individuals with relatively initial physical-movement levels, including both males and females, under the cyclical stationary method.

The study utilized "training complexes" with athletic features as an operational structure for effective physical-motor and coordination preparation. The study was conducted to over two month. It was conducted with a group of 58 second-year students at the Faculty of Physical Activity and Recreation at the Sports University of Tirana in over two months.

The training practice significantly improved the indicators of motor skills and increased their growth within a shorter period of time. In the standing long jump test, personal results improved by 11-15 cm for both males and females. In the test 5-steps with jump from the place, personal scores improved by 50-79 cm for males and 40-60 cm for females. In the 50 m run test, personal results improved by 0.3-0.4 sec.

Keywords: Movement skills, Amplitude, Mobility, Plyometrics, Coordination.

1. Introduction

"Motor skills are physical and functional predispositions that intervene to solve and carry out motor acts to the end". (DASHI E.; DASHI T., (2007): Edukimi fizik në shkollë: pp. 25-26).

The development of these skills is the primary task before any physical activity of sports, recreational and applied preparatory character, on which performance and specific achievements directly depend. The practice acquaints us with many rich experiences, dedicated to the process of motor and psychological formation, where the cyclical stationary method has provided an important help. This method was implemented for the first time at ILKF "Vojo Kushi" (today the Sports University of Tirana, in Albania), during the development of the teaching-training process with the group of athletes of this school, around the years 1965-70, especially in the group of jumps and throws by lecturers B. Hatibi, T. Duka, S. Jegeni

The cyclical stationary method has been implemented in a more organized way with the students of athletics specialties at the High School of Sports Mastery as well as student athletes at the Higher Sports Branch, near ILKF "Vojo Kushi" in Tirana, in the years 1975-85 with the athletic groups of speed-strength 2-3 times a week, throughout the training year, where the achievements were qualitative and realized in a

more accelerated manner. This method has taken an important place in the training programs of many athletes of that period, where we mention: Ajet Toska in the hammer throw with 75.12 m, Gjergj Ruli, in the long jump with 7.70 m, Artan Spahiu, in 110 m/h, with 14.2 sec., Gëzim Çorja and Qemal Çorja, in the high jump, with 2.10 m and 2.11 m. Liljana Karanxha in 100 m/h with 13.9 sec and pentathlon with 4078 points etc.

Coach Dh. Skënderi has made a significant contribution to motor training, through the deliberate integration of the cyclical stationary method: "The circular stationary method means that training method, where the physical-movement exercises are performed according to a certain sequence and method". (Skënderi Dh. (2012): Përgatitja fizike në sport, [Monograph] pp. 63-68). His contribution is very valuable in the organization of the athletic physical preparation for the young football players of the Olympic Team of Tirana, and of the Albanian National Team where, in addition to the achievements in the physical movement indicators of the tests, he has built tables with different tests in the framework of the objectives motors, (Skënderi Dh., (2012): Përgatitja fizike në sport, [Monograph] pp. 257-266).

Specialist F. Dibra, has systematically studied and applied the cyclic stationary method with students and athletes, near UST, in Tirana since 1970. "The circular method is a training method for solving physical-motor tasks of a complex nature". (Dibra F.,

(2007): Atletika: Bazat e Stërvitjes Sportive: pp. 60-67. He evaluates this method as a progressive training method, for the most accelerated qualitative and quantitative complex development of physical, motor and coordinative as well as emotional indicators. It shows the types, ways of implementing complex exercises with elements of sprinting and plyometric jumps, which create powerful stimuli that enable positive physical-motor changes.

Relying on this experience gained by various researchers and specialists in the field of organized physical-motor activity, I undertook a special activity with a group of students, which would further develop the motor indicators, in the refinement of the preparatory bases of the cyclic stationary method, as a form and primary factor for increasing the yield of the training process. I present this experience below in the form of a modest study, which opens the right horizon for an activity with more results in the future.

This study focuses on organized physical and recreational activities with the main goal of recognizing and implementing an original training methodology that can lead to accelerated improvement and greater enhancement of athletic motor skills indicators. The study applies the stationary cyclic method to individuals with initial-level physical-motor skills.

2. Methodology

This study is based on the analysis and creative processing of contemporary progressive ideas and experiences. It also incorporates the conclusions of an experimental activity that aimed to implement training complexes with athletic features as an effective operational structure for preparing motor skills. The activity was conducted with a group of 58 second-year students from the Faculty of Physical Education and Recreation at the University of Sports in Tirana, aged 19-20, to over a two month for both male and female participants, divided into two groups:

Experimental group: actively participated in the training process, consisting of 19 boys and 19 girls, for a total of 38 people.

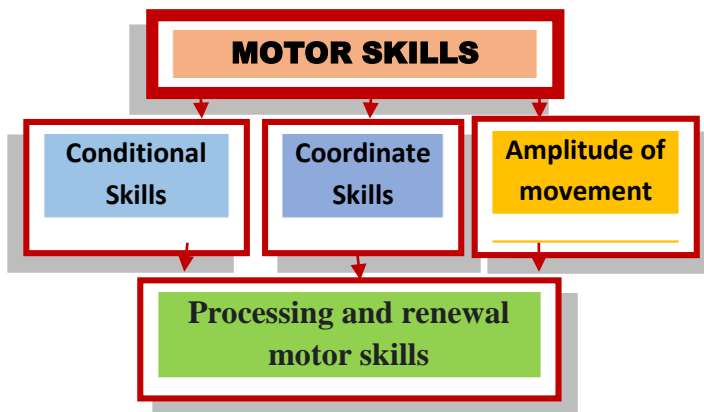
Comparison group: only participated in the motor tests, with their results being compared to those of the experimental group. This group consisted of 10 male and 10 female, for a total of 20 participants.

Approach to the Problem

Motor skills with athletic features are prominently visible in dynamic and sports physical activities, such as sprint runs, athletic jumps, gymnastics, and sports games. In these activities, they exhibit certain physical-functional tendencies that aid in the solution of physical movement tasks that require a pronounced active and coordinative character. These tasks are associated with high nerve-muscular stresses that are relatively short in both space and time.

Motor skills are the product of the mutual interaction of specific physical-functional, morphological, coordination, and movement amplitude factors. Muscle strength plays a vital role in this interaction. (Dibra F, 2007)- see Scheme 1."

Scheme 1. Motor skills in organized physical-motor activity (Dibra F., 2007)



Methodological and Organizational Requirements

The development of motor skills is organized through purposeful practical activity, involving special exercises and technical athletic schemes, based on the following methodological-organizational requirements:

- **Constructive movement activity** that is feasible in practice and applied freely with the right manner and rhythm. This is a crucial condition for perfecting the physiological bases for strengthening and creating reflexes, stereotypes, and motor habits.
- **Movement activity that develops conditional skills**, which are determining and necessary factors for the practical implementation of organized physical movement. Muscle strength (maximum, fast, and explosive), speed, and endurance play a significant role in this process. Sprints and plyometric jumps are

particularly important tools for preparing all kinds of strength and reaction skills. (Verkhoshansky Y, 1996; Jorgoni A, 2005; Dibra F, 2007).

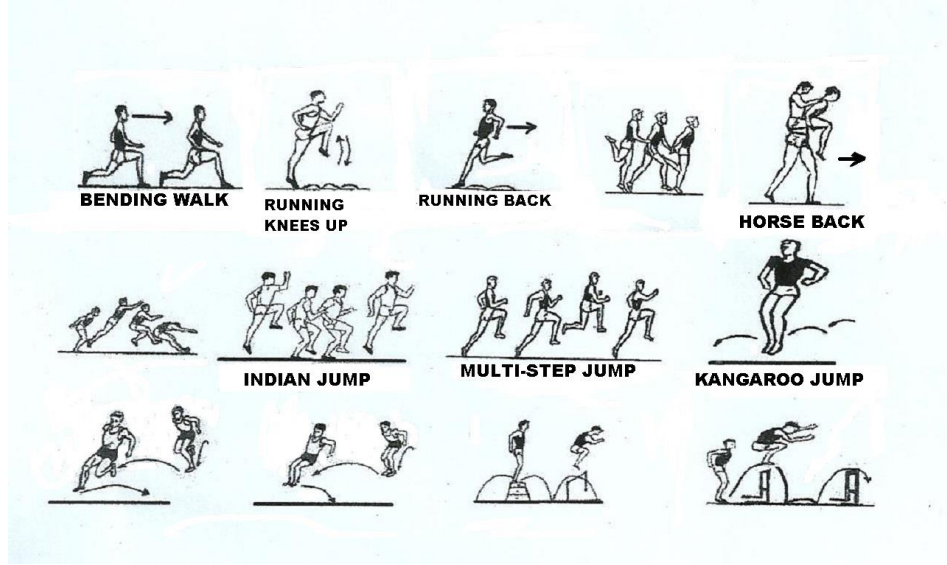
- **Movement activity that develops coordination skills** helps the subject to orientate and balance in space and time, distinguish, coordinate, and transform the movement action in accordance with the appropriate rhythm, amplitude, and symmetry. (Manno R, 1993; Kasa, A, 1995; Dibra F, 2007).
- **Movement activity that develops movement amplitude**, which is closely related to the elasticity of the muscle fibers and the mobility of the joints, within the anatomical limits, aiding in the breadth and fluidity of the actions as well as the movement technique.
- **Varied and emotional movement activity** through the varied implementation of the stationary method (exercise through play). Positive emotions help to increase performance by motivating the athlete to increase confidence in their abilities and concentration. (Zhurda Y., 2013).
- **Controlled and assessed movement activity**, where the physical-coordinative testing process plays a crucial role, with special tests like the long jump from the place with two legs and jump 5-step from place.

Program and implementation in practice

The training program contains the "**training complex**" as the basic training unit for the development of motor skills. It is applied in a general and specific way through the cyclic stationary method. The program comprises a block of 23 exercises, mainly consisting of sprints and plyometric jumps.

The General Complex:

The general complex is designed with exercises that develop strength, speed, endurance, coordination skills, and range of motion. This training structure is implemented through the coordination of training stations, in continuous movement, "going and returning" in four main types, as shown in Scheme 1:



Scheme 1: Exercises for the preparation of motor skills

The General Complex 1 is organized in teaching sessions 2, 6, 11, and 15, within an active space of 120 m. It consists of the following stations: *Station 1* (go, 15 m): Non-stop "kangaroo" jumps in length with two feet together; *Station 2* (return, 15 m): Run with heels thrown back; *Station 3* (Walk, 15 m): Jumps on the left leg; *Station 4* (return, 15 m): Jumps on the right leg; *Station 5* (go 30 m): "Indian" jumps; and *Station 6* (return, 30 m): Sprint 30 m from the high start.

General Complex 2 is organized in teaching sessions 3, 8, and 13, within an active space of 80 m. It includes the following stations: *Station 1* (go, 10 m): Running with small steps; *Station 2* (return, 10 m): Running with knees up; *Station 3* (go, 10 m): Run forward; *Station 4* (return, 10 m): Running back; *Station 5* (go, 20 m): Non-stop "kangaroo" jumps and *Station 6* (return, 20 m): Multi-step jump.

General Complex 3 is organized in teaching sessions 4, 7, 10, and 14, within an active space of 100 m. It includes the following stations: *Station 1* (go, 10 m): Jumps over 2-3 obstacles 60 cm high with two feet, with 1-2 intermediate supports; *Station 2* (return, 10 m): Powerful vertical jump with a 360-degree spin-pirouette; *Station 3* (go, 20 m): Running with the partner on the back, "Kalibaç"; *Station 4* (return, 20 m): Running with the partner on the back, "Kalibaç," with a change of roles; *Station 5* (go, 20 m): "Indian" jumps; and *Station 6* (return, 20 m): "Meandering" run.

General complex 4 is organized in teaching sessions 5, 9, and 12, within an active space of 110 m. *Station 1* (go, 15 m) includes jumps combined with climbing and falling from objects such as chests, pods, and benches, and passages over an obstacle that is 60 cm high with two legs. *Station 2* (return, 15 m) involves running with small steps. *Station 3* (go, 15 m) includes lateral jumps from left and right on two joined feet. *Station 4* (return, 15 m) involves walking with a big step and deep bending on the knees. *Station 5* (Go, 20 m) includes a long jump on one leg, where 10 m are crossed on the left and 10 m on the right. *Station 6* (return, 20 m) involves a "meandering" run.

The specific complex

The specific complex is organized with specific variants, with moving schemes of a physical and technical character, through the cyclic method. "with a stop", where each exercise is performed in a concentrated manner, according to the determined time.

Specific complex 1 (in sessions 2, 6, 12 and 15): High jumps "Scissors" with momentum on a tight rubber band; 5-step jump from place, with 2-3 attempts. Control run 30 m.

Specific complex 2 (in sessions 3, 8, and 11): Running with 2-3 obstacles with reduced dimensions, long jump from the place with two legs, and 2-3 attempts. Run 50 m from the high start.

Specific complex 3 (in sessions 4, 7, 10, and 14): Long jump with little momentum, 5-step jump from the place with 2 attempts; and running 50 m from the high start.

Specific complex 4 (in sessions 5, 9, and 13): 3-step jump with little momentum, standing long jump with 2 attempts, and running 50 m from the high start.

A total of 58 participants were involved in the experimental activity, divided into two groups:

Experimental group: actively participated in the training process, consisting of 19 boys and 19 girls, for a total of 38 people.

Comparison group: only participated in the motor tests, with their results being compared to those of the experimental group. This group consisted of 10 male and 10 female, for a total of 20 participants.

The training program spanned 8 weeks, with two training sessions per week, preparation for each subject, following a predefined schedule. The participants were divided into groups based on gender. The training program included 16 practical sessions, each lasting 50 minutes, with motor tests conducted at the beginning and end of the program.

Each practical session included two sections, one focusing on the general complex and the other on the specific complex. Exercises were performed both partially and in full during the training.

3. Results and Discussion

Following the two-month training process, we conducted an analysis and mathematical evaluation of motor test data. The results revealed significant differences between the experimental and comparison groups for both men and women during **the second test. First**, we observed positive growth changes in all three motor tests for men in the experimental group, which were markedly different from the comparison group.

Table 1: Average Indicators of Motor Tests for Experimental and Comparison Groups, by Gender (Gr. 1=Experimental Group, Gr. 2=Comparison Group)

Test	Testing	Men			Women		
		Gr.1	Gr.2	Difference	Gr.1	Gr.2	Difference
Standing long jump (m)	Testing 1	2.18	2.01	0.17	1.71	1.73	0.02
	Testing 2	2.31	2.06	0,25	1.83	1.79	0.04
	Difference	0.13	0.05	0.08	0.12	0.06	0.06
5-step standing jump (m)	Testing 1	10.62	9.85	0.77	8.05	8.18	0.13
	Testing 2	11.27	10.12	1.15	8.53	8.39	0.14
	Difference	0.65	0.27	0.38	0.48	0.21	0.27
50 m run (sec)	Testing 1	7.10	7.38	0.28	9.00	8.84	0.16
	Testing 2	6.77	7.27	0,50	8.68	8.72	0.04
	Difference	0.33	0.11	0.22	0.32	0.12	0.20

- **The experimental group, consisting of male subjects**, achieved good results in all motor tests, as seen in Table 1. The average personal results showed an increase of 13 cm in test 1; 65 cm in test 2; and 0.33 sec in

test 3. Compared to the comparison group, the experimental group showed a significant difference in the average personal results of the tests, with an 8 cm increase in test 1; 38 cm in test 2 and 0.22 sec in test 3.

- **The male subjects in the comparison group;** showed some improvement in motor indicators, but this was mainly due to the lack of special preparation.

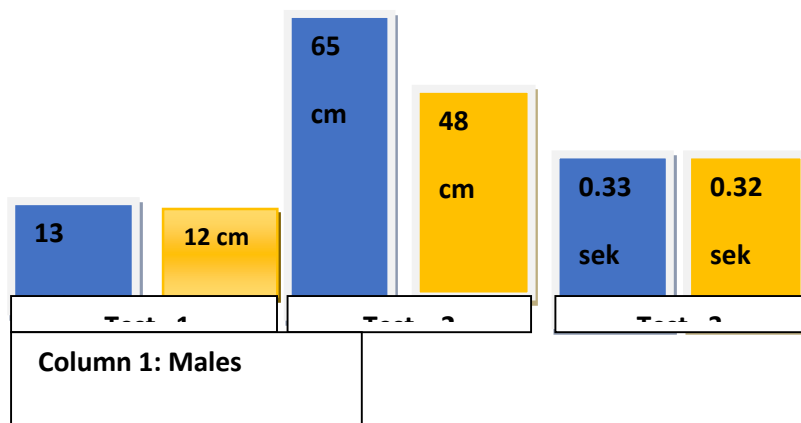
Secondly; positive growth changes were observed in all three motor tests among female subjects in the experimental group, with a marked difference compared to the comparison group (Table 1).

- **The female subjects in the experimental group;** also showed good achievements in all motor indicators, with an increase of 12 cm in test 1, 48 cm in test 2, and 0.32 sec in test 3. Compared to the comparison group, they scored a significant difference in the average personal test results, with a 6 cm increase in test 1, 26 cm in test 2, and 0.20 sec in test 3.

- **The female subjects in the comparison group,** also improved their motor indicators slightly, but progress was slow due to the lack of systematic preparation.

Third; The indicators of the growth of the personal results of the motor tests In the second testing, the personal results of the motor tests improved significantly in both male and female subjects in the experimental group. Males naturally stood out at higher levels than female subjects, but the difference in growth and improvement of the personal results of each physical-motor test softened and reached good levels for both genders. In test 1, there was a 13 cm increase for males and a 12 cm increase for females, in test 2, a 65 cm increase for males and a 48 cm increase for females, and in test 3, a 0.33 sec decrease for males and a 0.32 sec decrease for females (Scheme 2).

Scheme 2: Increase in motor indicators, experimental group, male and female (Test 1: standing long jump; Test 2: 5-step standing jump; Test 3: 50m run)



Here are some individual results for males and females (experimental group):

In test 1, first eighth male subjects (42 %) scored from 2.28-2.60 m, with a personal result increase of 13-15 cm. For the six first female subjects (32%), they scored 1.95-2.12 m, with a personal result increase of 13-15 cm. Others had an increase of 10-11 cm for both males and females.

In test 2, first eighth male subjects (42 %) scored 11.90-12.60 m, with a personal result increase of 67-79 cm. For fifth first subjects females (26%), they scored 9.00-9.14 m, with a personal result increase of 56-60 cm from the first to the second test. Others had an increase of 45-63 cm for males and 39-50 cm for females.

In test 3, first ninth male subjects (47 %) scored from 6.2 sec to 6.7 sec, with a personal result increase of 0.3-0.4 sec. the fifteenth first female (79%) scored from 7.8 to 8.9 sec, with a personal result increase of 0.3-0.4 sec from the first to the second test. Others had an increase of 0.2 sec for both males and females.

At the end of this discussion, we come to the conclusion that the main objective of this study was achieved - the accelerated quantitative and qualitative improvement of physical motor-motor and psychological indicators, as a result of the organization and implementation of stationary cyclic training. These achievements are even relatively higher, compared to individuals in organized groups that systematically implement physical exercises and sports.

Thus, compared to some basic physical-motor indicators, which serve as targets for young age football subjects, (which are reflected in the monograph: "Physical preparation in sport", compiled by Skënderi Dh, (2012), pp. 267-272), the average indicators of increase in individual test scores of the male experimental group students are higher, even achieved within 2-month rather than 1-year training periods. For example:

- In the long jump from the place; the experimental group has an average growth of 13 cm, while the objective indicators are 9-10 cm.
- In the 5-step jump from the place; the experimental group has an average growth of 65 cm, while the objective indicators are 40-45 cm.
- In the 50 m run; the experimental group has an increase in 0.3-0.4 sec, while the objective indicators in 0.2 sec.

4. Conclusions and recommendations:

1. The training activity presented in this paper is original, simple, varied, feasible, and effective for improving motor skills, physical coordination, and technical indicators, especially growth too. This form is recommended to be applied creatively with interested subjects for accelerated physical-motor preparation, within the framework of a training week, where two stationary circuit training sessions are planned to take place on different days.
2. The training activity, based on training complexes with dynamic athletic exercises of sprints and plyometric jumps and implemented through the circular stationary method (exercise through the game), creates a dense activation of specific stimuli that bring more accelerated changes in motor skills. For this reason, it is recommended to be applied with sprints and various jumps in its content, as universal and fruitful exercises for motor development.
3. This training method affects the creation of a positive psychological and emotional state, which increases enthusiasm, readiness, and systematic activation and avoids situations of anxiety and fatigue in the teaching-training process. Therefore, it should be reflected in training programs, especially those of physical education at school, but also fitness.

References

- [1]. BOMPA T., (1999). Theory and Methodology of Training
- [2]. CUKA A., (2004): Shpejtësia [Monograph]. ISBN: 99927-809-3, pp.24-30.
- [3]. DASHI E., (2001): Teoria e lëvizjes, pp.42-67.
- [4]. DASHI E., (2004): Lojërat lëvizore dhe edukimi. ISBN: 99927-998-0-0, pp.9-22.
- [5]. DASHI E.; DASHI T., (2007): Edukimi fizik në shkollë: ISBN: 974-99943-990-1-7, pp.25-54

- [6]. DICK F.,(1984). Training Theori.
- [7]. DIBRA F., (2007): Atletika: Bazat e Stërviitjes Sportive: ISBN: 978-99927-0-444, pp.53-55, pp.70-75.
- [8]. FAMOSSE J.P., (1984) : L'acquisition des habilités motrices.
- [9]. HELAL H., (1984): Programation d'entraînement.
- [10]. JORGONI A., (2005): Teoria e stërviitjes sportive.
- [11]. KASA A., (1995): Bazat e stërviitjes sportive me fëmijët e moshës 10-14 vjeç, pp.177-186.
- [12]. MANNO R., (1993): Evoluzione e sviluppo delle abilità motorie, SDS: pp.75-84.
- [13]. MARKOLA L., (2005): Fëmijët dhe Sporti..ISBN: 99943-707-3-1, pp.35-55
- [14]. MATVEJEV L., (1981). Fundamentals of Sports Training.
- [15]. PROST R., (1985): Pliometrie pour tous.
- [16]. SEGREVE L., (1996): Una originale interpretazione statunitense sportiva delle velocità.
- [17]. SKËNDERI Dh., (2012): Përgatitja fizike në sport, ISBN: 978-9928-107-67-1, [Monograph], pp. 63-68, pp. 257-272
- [18]. VERKHOSHANSKI Y., (1996): La velocità e la rapidità dei movimenti sportive. (Përkthyer në italisht nga rusishtja).
- [19]. WEINECK J., (1983) : Manuel d'entraînement. (Përkthyer në frëngjisht nga anglishtja).
- [20]. ZHURDA Y., (2013): Psikologji e Sportit. ISBN: 978-9928-148-14-8, P. 62