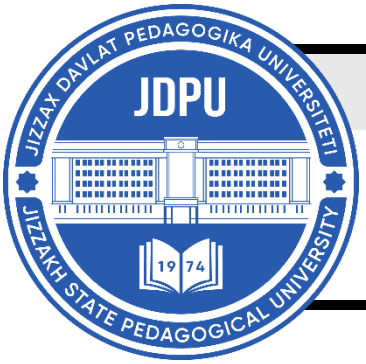
DOI: https://doi.org/10.37547/mesmj-V5-I9-12 Pages: 79-87

MENTAL ENLIGHTENMENT SCIENTIFIC – METHODOLOGICAL JOURNAL



MENTAL ENLIGHTENMENT SCIENTIFIC – METHODOLOGICAL JOURNAL

http://mentaljournal-jspu.uz/index.php/mesmj/index

METHODOLOGY FOR TEACHING STUDENTS WITH DISABILITIES TO PERFORM LONG JUMP AFTER A RUN-UP

Sherali Gafurov
Lecturer at the "Adaptive Physical Education and Sports" Department
Uzbekistan State University of Physical Education and Sports
Chirchik, Uzbekistan
E-mail: sherali.gofurov@mail.ru

ABOUT ARTICLE

Key words: Disabled, para-athletics, types of jumping, visually impaired, adaptive, nosology, sports classifications, development.

Received: 08.12.24
Accepted: 10.12.24
Published: 12.12.24

Abstract: The article focuses on practically proving the enhancement of physical fitness in students with disabilities through the application of jumping tools and methods in para-athletics as part of their physical development.

INTRODUCTION

Significant attention is being paid to further developing the field of physical education and sports in the Republic of Uzbekistan. Several presidential decrees, including Decree No. PQ-5114 dated May 18, 2021, “On Additional Measures for the Development of the Paralympic Movement,” Decree No. PQ-5281 dated November 5, 2021, “On Measures to Further Improve the Formation of Athlete Reserves for Olympic and Paralympic Sports by Fundamentally Reforming the Sports Education System,” and Decree No. PQ-5281 dated November 5, 2021, “On Comprehensive Preparation of Our Athletes for the XXXIII Summer Olympic Games and XVII Paralympic Games to Be Held in Paris (France) in 2024,” outline tasks that place great responsibility on specialists in this field.

Today, one of the most pressing issues is creating necessary conditions for individuals with physical disabilities and impairments (including upper-limb disabilities and visual impairments) to engage in para sports, specifically long jump with a run-up in para-athletics, ensuring their worthy participation in international sports arenas, providing state support, and conducting scientific research in this field.

Research Objective: To improve the physical fitness of students with disabilities by utilizing the tools and methods of jumping in para-athletics.

Research Tasks:

1. To identify and classify effective tools and methods in the jumping disciplines of para-athletics to enhance the general physical fitness of students with disabilities.

2. To develop the physical qualities of students with disabilities through the application of specialized tools and methods.

Research Results and Discussion: In recent years, consistent measures have been implemented in the Republic to promote physical education and sports, advocate for a healthy lifestyle among the population, create necessary conditions for the physical rehabilitation of individuals with disabilities, and ensure their worthy participation in international sports arenas.

The comprehensive physical development of students with disabilities primarily requires a focus on enhancing physical qualities. In the process of physical development, workload norms are distributed based on the students' age, gender, and physical preparedness. By applying these norms during training sessions, improvements in physical qualities and an increase in motor activity can be achieved.

Enhancing the specialized physical preparedness of athletes begins with developing their overall specialized physical abilities. In planning training sessions, we utilized specific workload ratios to balance the development of general physical fitness and specialized physical preparedness.

General physical preparation for para-athletes is a process aimed at their harmonious development, including the development of muscle movement, strengthening of limbs and systems, enhancing their functional abilities, improving control skills, and boosting physical qualities such as strength, speed, endurance, agility, and flexibility. It also addresses correcting shortcomings in posture and body structure. The development of general physical preparation involves using corrective tools to influence all the limbs and systems of the trainees. During training, exercises intended to improve general physical development should be utilized.

Specialized physical preparation in para-athletics is a process aimed at developing all functional capabilities of the athlete's body, as well as enhancing all limbs and systems to a high level, based on the specific requirements of the event. To achieve this, naturally, using specialized exercises and methods related to the chosen para-athletics discipline proves to be effective in developing the athlete's physical qualities.

During the training process, general physical preparation often involved exercises with a broad impact, while specialized preparation focused on exercises aimed at specific goals. However, in general physical preparation, exercises targeting specific aspects were also used to address physical development, body structure, posture, and to eliminate similar deficiencies.

In both general and specialized physical preparation, exercises that develop qualities such as strength, speed, endurance, agility, and flexibility are generally considered to be the most effective.

These physical qualities directly influence the functionality of the organs and systems throughout the para-athlete's body, enhancing their movement capabilities over time.

We determined the level of physical development in students through anthropometric indicators. The obtained results are presented in Table 1.

Anthropometric Indicators of Control Group Students

Table 1

№	Names and surnames	Year of birth	Height	Weight	Chest width	Inhalation	Exhalation
1	Dustmurodov J.	1998	172	70	88	91	86
2	Bobokulov M.	2003	178	65	90	94	85
3	Rakhmonov Sh.	2001	170	68	87	91	84
4	Salimov B.	1997	179	67	88	93	82
5	Urazmetov J.	1995	168	69	89	98	87
6	Mirzayev Sh.	1998	171	71	83	90	81
7	Sultonov A.	2001	177	68	89	91	88
8	Artikov D.	2003	173	69	81	89	80
9	Baratov U.	2002	172	70	90	93	88
10	Bekjanov K.	2001	172	66	91	96	87
11	Axmedov O.	2003	174	61	80	88	76
12	Ergashev B.	2001	170	72	84	89	83
	Average		**173**	**68**	**86,7**	**91,9**	**83,9**

The control group's students were assessed for their height, weight, chest width, breathing (inhalation), and exhalation indicators.

Anthropometric Indicators of the Experimental Group Students

Table 2

№	Names and surnames	Year of birth	Height	Weight	Chest width	Inhalation	Exhalation
1	Khakimov J.	2001	178	74	86	91	88
2	Tursunov D.	2002	173	66	84	89	81

3	Yusupov A.	1997	170	64	94	101	93
4	Uralov S.	1999	167	67	93	98	90
5	Inomkhujayev H.	2003	171	68	86	85	84
6	Karimov A.	2002	172	63	81	91	78
7	Rizayev R.	2000	170	66	80	87	78
8	Saidov A.	1999	168	71	88	94	87
9	Rasulov X.	1997	179	69	87	91	86
10	Osmonov B.	1996	174	72	92	100	90
11	Jumayev S.	2002	177	68	83	90	79
12	Sattorov K.	2001	172	73	90	98	87
Average			**172,6**	**68,4**	**87,0**	**92,9**	**85,1**

The height, weight, chest width, inhalation, and exhalation indicators of the experimental group students were determined.

When comparing the obtained results, the differences in age, height, and weight indicators between the two groups were not significant. The speed of movement of the students can be significantly improved by increasing their muscle strength. It is known that the less external resistance there is to the movements of para-athletes, the faster these movements are performed. Increasing muscle strength leads to an improvement in the speed of movement, primarily by enhancing the ability to generate force. With an increased capacity to exert muscle strength, neuromuscular coordination improves, allowing the athlete to perform powerful movements and generate force quickly (observe Table 3).

Dynamics of Physical Fitness Indicators of the Control Group Students

Results Before and After the Research

Table 3

№	Names and surnames		30m running (seconds)	60m running (seconds)	30m foot-to-foot jump (cm)	Standing long jump (cm)	Standing long jump (three hops) (cm)	Running long jump (cm)
1	Khakimov J.	T.o	4,4	8,6	25	184	7,89	4,20
		T.к	4,2	8,4	23	190	7,96	4,28
2	Tursunov D.	T.o	4,3	8,4	23	206	7,91	4,19
		T.к	4,2	8,2	21	211	7,97	4,31
3	Yusupov A.	T.o	4,5	8,4	24	191	7,98	4,38
		T.к	4,4	8,2	23	193	8,01	4,51
4	Uralov S.	T.o	4,5	8,8	22	189	7,67	5,06
		T.к	4,3	8,5	22	191	7,72	5,27
5	Inomkhujayev H.	T.o	4,2	8,3	23	211	8,26	4,55
		T.к	4,0	8,1	22	215	8,32	4,64
6	Karimov A.	T.o	4,8	8,7	22	183	7,46	4,89
		T.к	4,5	8,5	21	192	7,52	5,17
7	Rizayev R.	T.o	4,9	8,9	21	196	7,48	5,03

		T.к	4,7	8,7	21	208	7,51	5,18
8	Saidov A.	T.o	4,7	8,9	23	193	7,70	4,24
		T.к	4,5	8,7	22	201	7,81	4,31
9	Rasulov X.	T.o	4,5	8,6	23	185	7,83	4,41
		T.к	4,3	8,4	23	197	7,89	4,49
10	Osmonov B.	T.o	4,8	8,8	22	182	7,61	4,04
		T.к	4,5	8,5	23	189	7,68	4,15
11	Jumaev S.	T.o	4,5	8,5	23	187	7,94	4,18
		T.к	4,4	8,3	23	201	7,99	4,32
12	Sattorov K.	T.o	4,8	8,8	24	194	7,77	4,20
		T.к	4,6	8,6	22	196	7,79	4,28
	Average	**T.o**	**4,6**	**8,6**	**22,9**	**191,7**	**7,79**	**4,40**
		T.к	**4,4**	**8,4**	**22,2**	**198,7**	**7,85**	**4,46**
	Absolute increase (%)		0,2	0,2	0,7	7	0,6	0,6

Control Group Results Before and After the Research

The physical fitness indicators of the control group showed the following improvements:

30m run: improved from 4.6 seconds before the study to 4.4 seconds after the study.

60m run: improved from 8.6 seconds before the study to 8.4 seconds after the study.

30m lateral jumps (from foot to foot): measured at 22.9 cm before the study and improved to 22.2 cm after the study.

Standing long jump: improved from 191.7 cm before the study to 198.7 cm after the study.

Standing triple jump: improved from 7.79 m before the study to 7.85 m after the study.

Running long jump: improved from 4.40 m before the study to 4.46 m after the study.

Dynamics of Physical Fitness Indicators of the Experimental Group Students Before and After the Research

Table 4

№	Names and surnames		30m running (seconds	60m running (seconds)	30m foot-to-foot jump (cm)	Standing long jump (cm)	Standing long jump (three hops) (cm)	Running long jump (cm)
1	Dustmurodov J.	T.o	4,4	8,6	22	186	7,81	4,22
		T.к	4,0	8,0	20	201	8,03	4,46
2	Boboqulov M.	T.o	4,8	8,8	23	195	7,65	5,04
		T.к	4,3	8,1	22	211	7,96	5,26
3	Raxmonov Sh.	T.o	4,5	8,5	23	189	7,94	4,18
		T.к	4,1	8,1	21	201	8,16	4,81
4	Salimov M.	T.o	4,8	8,8	24	189	7,77	5,20
		T.к	4,5	8,4	21	206	7,92	5,38

5	Urazmetov J.	T.o	4,9	8,9	22	194	7,48	4,70
		T.к	4,5	8,3	20	215	7,74	5,02
6	Mirzayev Sh.	T.o	4,8	8,7	24	188	7,46	4,76
		T.к	4,6	8,3	21	207	7,69	5,10
7	Sultonov A.	T.o	4,5	8,8	25	191	7,67	5,05
		T.к	4,2	8,2	22	208	7,93	5,27
8	Artikov D.	T.o	4,7	8,9	23	184	7,71	4,66
		T.к	4,3	8,3	21	211	7,98	5,01
9	Baratov U.	T.o	4,5	8,6	23	196	7,83	4,42
		T.к	4,1	8,1	20	224	8,12	4,89
10	Bekjanov K.	T.o	4,3	8,4	25	189	7,91	5,19
		T.к	4,0	7,7	22	208	8,17	5,66
11	Axmedov O.	T.o	4,2	8,3	23	196	8,22	4,56
		T.к	4,0	7,9	21	214	8,49	5,12
12	Ergashev B.	T.o	4,5	8,4	24	194	7,98	4,39
		T.к	4,3	8,0	21	196	8,25	5,06
	Average	T.o	**4,6**	**8,6**	**23,4**	**190,8**	**7,79**	**4,70**
		T.к	**4,2**	**8**	**21**	**210,1**	**8,22**	**5,10**
	Absolute increase(%)	T.к	**0,4**	**0,6**	**2,4**	**19,3**	**0,43**	**0,40**

Experimental Group Results Before and After the Research:

30m run: measured at 4.6 seconds before the study, improved to 4.2 seconds after the study.

60m run: measured at 8.6 seconds before the study, improved to 8 seconds after the study.

30m lateral jumps (from foot to foot): measured at 23.4 cm before the study, improved to 21 cm after the study.

Standing long jump: averaged 190.8 cm before the study, improved to 210.1 cm after the study.

Standing triple jump: averaged 7.79 m before the study, improved to 8.22 m after the study.

Running long jump: measured at 4.70 m before the study, improved to 5.10 m after the study.

By applying the above methods, we focused on improving the physical fitness of students with disabilities. During the training sessions, running techniques and tools were utilized, considering their level of physical preparedness, and appropriate workloads were applied accordingly.

At the conclusion of the experiment, we determined the level of physical development of both groups of students through a final test. A comparison of the results at the end of the study revealed that the physical fitness of the experimental group students improved significantly

compared to the control group. We identified improvements in both general and specific physical fitness among the experimental group students.

Furthermore, we confirmed that incorporating running exercises into jump training is one of the most effective methods. These exercises included:

1. Running with small bounding steps (50–60 meters)
2. Running with backward leg kicks
3. High-knee bounding runs
4. Alternating foot bounding runs
5. Accelerated running

These exercises proved highly effective in helping students master jumping techniques and improving their physical development. The following specific jumping exercises were utilized:

1. Jumping over a 25–30 cm high obstacle (both stationary and in motion) on the right and left foot, 20 repetitions, performed 3 times.

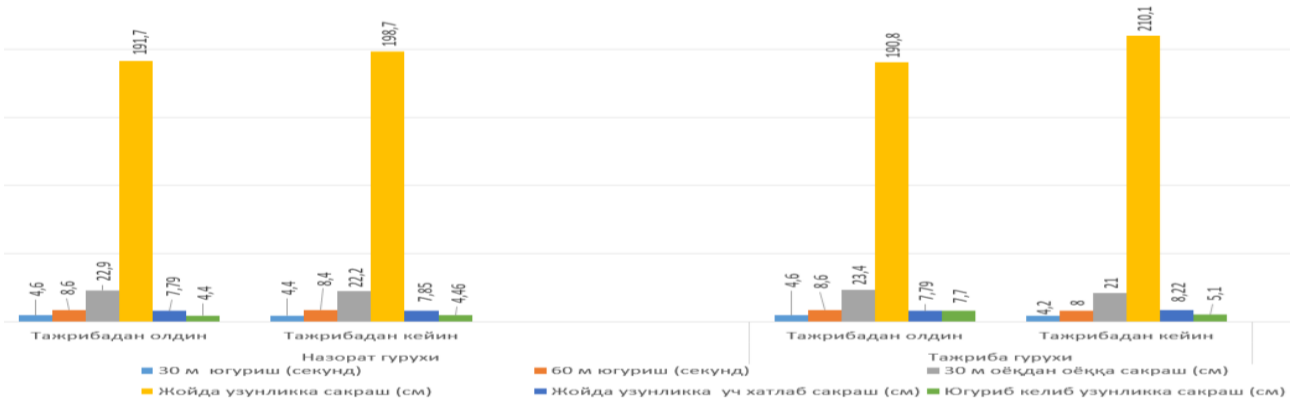
2. Jumping upward from a squatting position while holding a weight of 5–8 kg, 8–10 repetitions, performed 3 times.

3. Two-legged jumps over 70–80 cm high barriers (10 barriers), performed 3 times.

4. Jumping down and forward from a 70–80 cm high platform using the take-off foot, with emphasis on the coordination of the take-off and swing leg movements, 7–8 repetitions.

The exercises mentioned above were consistently performed by the students throughout the research period, with the training sessions conducted using high-intensity exercises. During the study, we compared the physical fitness indicators of both groups of students and observed noticeable differences. In the training sessions for the experimental group, jumping and running methods and tools were utilized to improve their physical fitness. The results obtained are presented in Tables 3 and 4 to illustrate the indicators.

The overall diagram of the physical fitness levels of the experimental group and the control group participants at the end of the study.



In conclusion, the comprehensive development of physical qualities in students with disabilities is a fundamental factor in improving their future preparedness. The correct application of methods and techniques used to improve the physical fitness of students with disabilities plays a crucial role in their physical development and health improvement. The exercise methodology used for students with disabilities during the research has been proven to be effective, as evidenced by the results they demonstrated.

The experimental group showed improvements in various physical tests:

30m running improved by 9.5%,

60m running improved by 7.5%,

30m foot-to-foot jumping improved by 11.4%,

Standing long jump improved by 9.2%,

Standing triple jump improved by 5.3%,

Running long jump improved by 7.8%.

This clearly indicates that the program we implemented yielded positive results, and the program proved to be effective. The overall physical fitness of students with disabilities improved by 17%, while their special physical fitness improved by 20%.

References

1. Sherali Hoshimovich Gafurov, Bahodir Hoshimovich Gafurov. "Promoting the Sport of 5x5 Football in Uzbekistan to Develop the Physical Activity of People with Visual Impairments." Scientific Progress, 2022, No. 6. URL: https://cyberleninka.ru/article/n/zbekistonda-5x5-futbol-sport-turini-ommalashtirish-or-ali-k-rish-obiliyatida-nu-soni-bor-shahslar-arakat-faolligini-rivozhlantirish (accessed: 15.11.2022).

2. Sherali Hoshimovich Gafurov. "Methods for the Development of Sports Training for Skilled Sprinters." Academic Research in Educational Sciences, 2021, No. 4. URL: https://cyberleninka.ru/article/n/malakali-sprinterchilarning-sport-mashg- (accessed: [insert date of access]).

3. L. B. Sobirova. "Effectiveness of Special Exercises in Preventing Growth Disorders in Younger Schoolchildren." Academic Research in Educational Sciences, 2021, No. 5.

4. Sherali Hoshimovich G'Ofurov, Dilshod Bahtiyor o'gli Bahtiyorov, Umid Abdugaforovich Saidov. "Organizing Training for Preschool Children Through Track and Field Exercises." Scientific Progress, 2022, No. 1. URL: https://cyberleninka.ru/article/n/maktabgacha-yoshdagi-bolalarni-yengil-atletika-mashqlari-orqali-mashg-ulotlarini-tashkil-etish (accessed: 13.12.2022).

5. Sherali Hoshimovich G'Ofurov. "Methods for the Development of Training for Short-Distance Runners." Scientific Progress, 2021, No. 8.

6. Sherali Hoshimovich G'Ofurov. "Methods for the Development of Sports Training for Skilled Sprinters." Academic Research in Educational Sciences, 2021, No. 4.

7. G'OFUROV SH. K. "Improving Training for Track and Field Athletes in Primary Training Groups at Children's and Youth Sports Schools." Fan-Sportga, 2020, No. 5, pp. 38-40.

8. M. X. Mirjamolov, R. F. Odilov, N. Y. Valiyeva, D. B. Bahtiyorov. "Methodology for Developing Coordination of Movements in Students with Visual Impairments." Academic Research in Educational Sciences, 2021, No. 12. URL: https://cyberleninka.ru/article/n/ko-rish-qobilyatida-nuqsoni-bo-lgan-talabalarda-harakat-koordinatsiyasini-rivojlantirish-uslubiyati (accessed: 22.01.2022).

9. N. K. Svetlichnaya. "Improving the Effectiveness of Adaptive Physical Culture and Sports for Children and Adolescents with Limited Health Abilities." In the collection: Olympic Sport and Sport for All. Collection of Scientific Works presented at the XXIV International Scientific Congress, Kazan, 2020, pp. 361-364.

10. S. A. Yunusov. "Physical Education of Schoolchildren in Inclusive Education." Scientific Progress // Scientific Journal ISSN, 2021, pp. 2181-1601.

11. Xo'jamkeldiyev, G. S., G'Aniboyev, I. D., Ziyayev, F. C., & Karimov, F. M. "Pre-Competition Training of Short-Distance Runners." Central Asian Research Journal For Interdisciplinary Studies (CARJIS), 1(3), 2021, pp. 270-274.

12. Khojamkeldiyev, G. "The Importance of Recovery in the Processes of Sports Exercises." Actual Problems of Humanities and Social Sciences, 3(7), 2023, pp. 233-237.

13. Khojamkeldiyev, G. S. "Medical and Biological Means of Increasing Working Capacity and Recovery of Athletes." Mental Enlightenment Scientific-Methodological Journal, Jizzakh, 2023, pp. 232-237.

14. Khujamkeldiyev, G. S. "The Importance of Recovery in the Processes of Sports Exercises." In Physical Education and Sport in Higher Educational Institutions: Collection of Articles of the XIX International Scientific Conference, Belgorod, April 25–26, 2023. Belgorod State Technological University, 2023, pp. 462. ISBN 978-5-361-01170-4.