

METHODOLOGICAL PROPERTIES OF THE SPECIAL MOBILE APPLICATION MECHANISM FOR PRIMARY SCHOOL STUDENTS

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Annotation: This article discusses the use of Scandinavian walking for the benefit of primary school students and their positive impact on students' health.

Keywords: Scandinavian walking, basic training, healthy living, physical training, functional training.

Relevance. Today, in order to improve the quality of education, a number of scientific and practical work is carried out by many of our scientists in order to organize education on the basis of innovative ideas and foreign experience. Pedagogical software for teaching various subjects in our country and abroad, in particular, electronic textbooks and manuals, simulators, automated learning technologies and electronic information resources have been created and are widely used today to improve the quality of education.

The most gratifying is the use of ICT in the field of physical culture and sports, as well as their effective use in scientific research. Especially today, mobile technologies are widely used as a convenient means of information exchange, which has become an integral part of our way of life. Mobile technologies are gaining ground in all developed countries, in various fields, including: manufacturing, medicine, industry and education.

The purpose of the study: To strengthen the level of harmonious development and preparation of primary school students in the Scandinavian walk in their free time using the mobile application "Scan.Hod-2".

Research objectives:

To study the characteristics of physical education classes and to assess the level of health, morphofunctional status and physical fitness of primary school students.

Substantiate the methodology of the use of Scandinavian walking aids in the extracurricular activities of primary school students.

Develop a classification of Scandinavian walking aids based on the impact of developing physical qualities on primary school students.

Improving the effectiveness of physical and functional fitness indicators using Scandinavian walking with primary school students.

Research methods: analysis and generalization of scientific and methodological literature; pedagogical test; medical and biological methods; pedagogical experiment; methods of mathematical statistics.

Organization of the research: The pedagogical research was attended by primary school students (4th grade students, a total of 72 students aged 10, including 36 boys and 36 girls) in secondary schools No. 2 and 7 in Turakurgan district of Namangan region. All study participants (n = 144) were divided into two groups: ("TG") experimental and ("CG") control groups. The number of children in both groups was the same (n = 72).

In order to increase the level of physical fitness of primary school students, we have created and put into practice the mobile application "Scan.Hod - 2" in order to use Scandinavian walking in their free time using mobile devices. The mobile application developed by us is registered by the Intellectual Property Agency under the Ministry of Justice under the number DGU 12768.

Research results and its discussion:

The pedagogical study showed that there were no differences in the previous status of the statistical comparisons made between CG and TG, which we examined at the beginning.

In the control group, the average performance for the 30-meter high start was 6.01 ± 0.54 seconds, and in the experimental group, 6.1 ± 0.58 seconds, reliability ($t = 1.35$; $r > 0.05$). Jumping rope for 1 minute results 58.1 ± 6.6 times in the control group and 58.5 ± 6.5 times in the experimental group, reliability ($r > 0.05$). In terms of speed quality, it shows that the groups are the same.

In the next 3x10 meter moxibustion run, we observed the following: the control group showed results in moxibustion running for 11.1 ± 1.37 seconds, and in the experimental group for 11.2 ± 1.46 seconds, reliability ($t = 0.6$; $r > 0.05$). Forward bending test while sitting on the floor and holding a Scandinavian stick, NG 7.02 ± 0.69 times, 7.1 ± 0.84 times in the experimental group, reliability ($t = 1.14$; $r > 0.05$).

In the long jump exercise, the values of the control group were 112 ± 9.8 cm, and in the experimental group - 114 ± 10.8 cm, reliability ($t = 1.87$; $r > 0.05$). These figures suggest that power qualities are almost equal between the experimental and control groups.

Bend your arms while leaning on the floor. Here, too, we observed that in the control group this value was 15.08 ± 1.68 times, and in the experimental group 15.3 ± 1.61 times, reliability ($t = 0.94$; $r > 0.05$). Pulling on a horizontal bar. This control exercise helped us identify the following. In particular, in the control group this value was 4.16 ± 0.52 times, and in the experimental group 4.25 ± 0.57 times, reliability ($t = 1.40$; $r > 0.05$). This also revealed that there were no reliable statistical differences between these indicators (see Table 1).

Sitting leaning on a Scandinavian cane. In CG this figure is 35.1 ± 3.71 times, and in TG 34.3 ± 3.45 times, reliability ($t = 1.90$; $r > 0.05$). Scandinavian walk of 400 m. 242.5 ± 23.2 seconds in CG and 250.3 ± 24.8 seconds in TG ($t = 1.95$; $r > 0.05$).

1 – Table

Statistical analysis of physical fitness indicators of primary school TGs and CGs examined at the beginning of pedagogical research

T / p	Types of tests	Control group n=72		Practise group n=72		differ ences	T	P
		$x \pm \sigma$	V %	$x \pm \sigma$	V %			
1	30 m. long-distance running from a high start, (seconds)	$6,01 \pm 0,54$	8,98	$6,1 \pm 0,58$	9,50	0,09	1,35	$p > 0,05$
2	Jump rope (For 1 minute) (times)	$58,1 \pm 6,6$	$11,35$	$58,5 \pm 6,5$	$11,14$	0,4	0,51	$p > 0,05$
3	Moximon running 3x10 m. (seconds)	$11,1 \pm 1,37$	$12,34$	$11,2 \pm 1,46$	$13,03$	0,1	0,6	$p > 0,05$
4	Sit on the floor and lean forward while holding a Scandinavian stick. (March)	$7,02 \pm 0,69$	9,82	$7,1 \pm 0,84$	$11,83$	0,08	1,14	$p > 0,05$
5	Long jump from a standing position (cm)	$112 \pm 9,8$	8,75	$114 \pm 10,8$	9,47	2	1,87	$p > 0,05$

6	Bending the arms while leaning on the floor (times)	15,08±1,68	11,14	15,3±1,61	10,52	0,22	0,94	p>0,05
7	pull on a horizontal bar (on a low bar for girls) (times)	4,16±0,52	12,5	4,25±0,57	13,41	0,09	1,40	p>0,05
8	Sitting on a Scandinavian stick (times)	35,1±3,71	10,56	34,3±3,45	10,05	0,8	1,90	p>0,05
9	Scandinavian walk of 400 m (seconds)	242,5±23,2	9,58	250,3±24,8	9,90	7,8	1,95	p>0,05
10	12 minutes Scandinavian walk (meters)	1115,3±118,2	10,60	1082,7±110,4	10,19	32,6	1,19	p>0,05

The last control indicator is a 12-minute Scandinavian walk. 1115.3 ± 118.2 meters in CG and 1082.7 ± 110.4 meters in TG, reliability (t = 1.19; r>0.05). In the last two control rounds, the results were very low, indicating that the students had no understanding of Scandinavian walking.

During the experiment, it was observed that in the past, in the control group, which traditionally spent their free time, all indicators changed compared to the initial results, while in the control group there were significant differences in all indicators.

The test results in CG and TG were more clearly visible in the table view at the end of the experiment. Comparative statistical analysis of physical fitness indicators of TG and CG groups examined at the end of the pedagogical experiment is given in Table 2.

For example 30 m. the distance ranged from a high start in CG was 6.01 ± 0.54 seconds at the beginning of the study and 5.86 ± 0.41 seconds at the end of the study, i.e., 0.15 seconds (t = 1.84 p> 0.05). TG da 30 m. At the beginning of the study on long-distance running was 6.1 ± 0.58 seconds, at the end of the study this figure changed to 5.56 ± 0.52 seconds, ie the result was improved by 0.54 seconds (t = 5.88; p > 0.05) The differences in TG were statistically high and reliable.

Subsequent values increased 58.1 ± 6.6 times at the beginning of the study and 61.2 ± 7.5 times at the end of the study, ie 3.1 times (t = 5.88 and statistically unreliable p> 0.05).) was equal to. In TG, this figure was 58.5 ± 6.5 times, respectively, and at the end of the experiment, this figure was 64.7 ± 7.2 times, an increase of 6.2 times.

CG to 3x10 m. The maximum run was 11.1 ± 1.37 seconds at the beginning of the study and 10.7 ± 1.19 seconds at the end of the study (t = 1.84 and statistically unreliable p> 0.05). In TG, this figure was 11.2 ± 1.46 seconds at the beginning of the study and 10.3 ± 1.30 seconds at the end of the study (t = 3.86 and statistically reliable p> 0.001).

Tension on the horizontal bar was expressed in CG 4.16 ± 0.52 times before the experiment, but at the end of the experiment it was 4.33 ± 0.61 times and increased only 0.17 times (t = 1.76 and p < 0.05). In TG, these values were 4.25 ± 0.57 times at the beginning of the experiment and 4.44 ± 0.63 times at the end of the experiment, (t = 0.28 and p < 0.001) statistical differences are reliable (see Table 2).

2 – Table

Results of testing of physical fitness indicators at the beginning and end of pedagogical practice of primary school experimental and control groups (n = 144)

TYPES OF TESTS	GR OUP	BEFORE practice		After practice		diffe renc e	t	P
		x±σ	V %	x±σ	V %			
	HG	6,01±0,54	8,98	5,86±0,41	7,19	-	1,84	>0.05

30 m. long-distance running from a high start, (seconds)						0,15		
	ТГ	6,1±0,58	9,50	5,56±0,52	9,35	-0,54	5,88	<0.001
Jump rope (For 1 minute) (times)	НГ	58,1±6,6	11,35	61,2±7,5	12,19	+3,1	2,60	<0.05
	ТГ	58,5±6,5	11,14	64,7±7,2	11,12	+6,2	5,29	<0.001
Moximon running 3x10 m. (seconds)	НГ	11,1±1,37	12,34	10,7±1,19	11,12	-0,4	1,84	>0.05
	ТГ	11,2±1,46	13,03	10,3±1,30	12,62	-0,9	3,86	<0.001
Sit on the floor and lean forward while holding a Scandinavian stick. (times)	НГ	7,02±0,69	9,82	7,4±0,80	10,81	+0,38	2,77	<0.01
	ТГ	7,1±0,84	11,83	8,3±0,91	10,96	+1,2	8,14	<0.001
Long jump from a standing position (cm)	НГ	112±9,8	8,75	115,3±10,6	9,48	+3,3	1,84	>0.05
	ТГ	114±10,8	9,47	121,2±11,4	9,40	+7,2	3,78	<0.001
Bending the arms while leaning on the floor (times)	НГ	15,08±1,68	11,14	15,77±1,89	10,48	+0,69	2,26	<0.05
	ТГ	15,3±1,61	10,52	16,52±1,80	10,89	+1,22	4,25	<0.001
Pulling on a horizontal bar (times)	НГ	4,16±0,52	12,5	4,33±0,61	14,18	+0,17	1,76	>0.05
	ТГ	4,25±0,57	13,41	4,44±0,63	14,18	+0,28	2,90	<0.001
Sitting on a Scandinavian stick (times)	НГ	35,1±3,71	10,56	36,8±3,91	10,61	+1,7	2,60	<0.05
	ТГ	34,3±3,45	10,05	38,8±4,3	11,08	+4,5	6,81	<0.001
Scandinavian walk 400 m (seconds)	НГ	242,5±23,2	9,58	230,4±22,5	11,25	-12,1	3,14	<0.01
	ТГ	250,3±24,8	9,90	219,1±23,9	10,90	-31,2	7,77	<0.001
12 minutes Scandinavian walk (meters)	НГ	1115,3±118,2	10,60	1168,2±122,1	10,45	+52,9	2,6	<0.05
	ТГ	1082,7±110,4	10,19	1210,2±130,1	10,75	+127,5	6,21	<0.001

In the CG, the Scandinavian crutches were 35.1 ± 3.71 times at the beginning of the experiment, but by the end of the experiment their mean values had increased 1.7 times to 36.8 ± 3.91 times ($t = 2.60$). and $p < 0.05$). According to this indicator, TG increased 34.5 ± 3.45 times at the beginning of the experiment, 38.8 ± 4.3 times after the experiment, and 4.5 times, the growth rate was significant ($t = 6.81$ and $p < 0.001$). statistically reliable.

The results of the Cooper test show that the CG was 1115.3 ± 118.2 meters before the experiment and 1168.2 ± 122.1 meters at the end of the experiment, or the rate of increase in endurance was statistically unreliable at 52.9 meters ($t = 2, 6$ and $p < 0.05$). In TG, this figure was 1082.7 ± 110.4 meters before the

experiment, but improved by 1210.2 ± 130.1 meters at the end of the experiment, or the endurance growth rate was statistically 127.5 meters ($t = 6.21$ and $p < 0.001$).) formed.

In the 400 m Scandinavian walk, the following was found: CG showed a result of 242.5 ± 23.2 seconds at the beginning of the experiment, and 230.4 ± 22.5 seconds at the end of the experiment. The growth rate improved by 12.1 s ($t = 3.14$ and $p < 0.01$). In this walk, the TG improved by 250.3 ± 24.8 seconds at the beginning of the experiment and by 219.1 ± 23.9 seconds after the experiment, or the growth rate improved by 31.2 seconds, statistically reliable ($t = 7.77$ and $p < 0.001$).) grew.

Conclusion: The results of a study on the use of Scandinavian walking in extracurricular activities of primary school students allowed to note the following conclusions:

1. According to the results of the study and analysis of the scientific and methodological literature, it has been found that today this Scandinavian walk is used by adults to improve their health. The lack of sufficient research-based literature on strengthening children's physical development and fitness levels was identified during the research process.
2. Scandinavian walking in the comprehensive development of children has a positive effect on their body. There is almost no risk of injury during training sessions. Scandinavian walking provides muscle function (up to 90%) compared to normal walking. The whole body is involved in the movement, and it was observed that the active functioning of the most important muscles of the legs, abdomen, buttocks, back and arms is ensured at the same time as the exercise.
3. This situation determines the need and relevance of developing a methodology of lessons using Scandinavian walking aids, taking into account the climatic and geographical features of our country. These results will serve to strengthen the health, comprehensive physical development and physical fitness of primary school students.

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