



DYNAMICS OF INITIAL SWIMMING READINESS OF JUNIOR SCHOOL CHILDREN IN THE SCHOOL SPORTS CLUB

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Abstract

The purpose of the study was to estimate the effect of swimming lessons in a school sports club on the initial swimming fitness of primary school-aged children.

Materials and methods. The study participants were 73 primary school-aged children ('Sportrend' school sports swimming club). The study used theoretical analysis of scientific and methodological literature, the system of control exercises by O. Obrazhei revised taking into account the contingent of the research to assess the swimming fitness of primary school students under the conditions of a school sports club, and methods of mathematical statistics.

Results. We propose a methodology for assessing the swimming readiness of younger schoolchildren under the conditions of a school sports club. The growth rate of such indicators as reaction to the unsupported position in the water and underwater breath-holding turned out to be lower compared to other indicators. At the same time, the rates of face submersion in the water and squatting in the water increased. The increase in initial swimming skills in children was 49.3% at the control stage compared to the baseline, and the average growth rate was 22.2%. In the assessment of children's initial skills at the end of the training compared to the beginning, the maximum average rate of increase was recorded for the ability to push off and slide (30.1%), the ability to perform a star float (27.4%), and squatting in the water (26.4%), thus swimming lessons have a positive effect on the initial swimming readiness of junior school students.

Conclusions. Statistically significant ($p < 0.05$) improvement of primary school students' results on control exercises at all stages of diagnostics of their initial swimming skills formation confirms the positive effect of swimming lessons in a school sports club.

Keywords: swimming, primary school-aged children, sports club, assessment, swimming readiness.

Introduction

Research on physical education and sports raises concerns about the health of school children (Andrieieva et al., 2020; Korolchuk, 2019; Savliuk et al., 2020), even at the initial stages of studying (Limarenko et al., 2014). After all, the foundations of health formation during the period of primary school age are the basis of the health of a working person (Hrytsiv, 2015; Kashuba et al., 2018; Lazko et al., 2021). In

connection with the mentioned unfavorable trend, scientists became more active in the search for the most effective means of overcoming it. Thus, the effectiveness of fitness programs in the system of improving the health of schoolchildren is investigated (Andrieieva et al., 2021; Ivanyshyn et al., 2021; Savliuk et al., 2020), gender differences that must be taken into account in the process of their physical education are studied (Berezhna, 2013; Dudko et al., 2017; Futorny et al., 2016), the health-improving effect of various kinds of sports on their morphofunctional state is evaluated (Barbry et al., 2022; Goncharova et al., 2022; Madsen et al., 2022), etc.

Swimming takes one of the leading places among the leaders of the favorable influence on a child's body during

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sports training (Sakhnovsky, 1995; Lyashenko et al., 2012). It is concerned as an effective means of developing water skills, overcoming fear of water, strengthening health, and increasing the adaptation capabilities of their body (Button, 2016; Peden et al., 2020; Tian, 2023). In addition, the positive motivation of junior pupils to health-improving swimming classes has been proven (Grashchenkova, 2015; Madsen et al., 2022). Therefore, there is a constant search for reserves to optimize educational and training processes when organizing swimming classes with children of primary school age (Obrazhei, 2021, 2023).

Nowadays, club forms of organizing classes in the studying process of the educational environment of the school are gaining more and more popularity. It has been proven that the effectiveness of a sports club in a secondary education institution depends on the purposefulness of its activity, and its functioning is based on the interaction of the teachers-coaches who ensure its activity, and the parents of the club's students, systematic medical control, which is carried out by the head coach in cooperation with the medical staff of the institution (Lyashenko et al., 2012; Tkachova et al., 2020). The fundamental difference of the school sports club is the possibility of differentiating the content of the educational and training process of junior schoolchildren in the context of the formation of different age groups (Bondar, 2009; Limarenko, 2014; Goncharova, 2020). The same applies to a swimming club. Instead, the issue of determining children's swimming fitness arises when forming groups. The systems of swimming fitness assessment that are widely used in practice today are focused mainly on the use in sports activities (Vogt, 2020; Moreno-Murcia, 2008, 2020; Mouro, 2021) under specific conditions of the organization of the educational and training process (Obrazhei, 2023).

However, despite the growing interest of scientists in the development of sports clubs' activity in swimming in the school educational environment (Bondar et al., 2009; Korolchuk, 2022), a number of questions remain not fully solved, including determination of influence of swimming in a school sports club on the initial swimming fitness of children of primary school age, which determined the subject of the conducted research.

Material and methods

Participants

73 Primary school age children took part in the study, which was carried out based on the "Sportrend" school sports swimming club of Gymnasium No. 315 in Kyiv.

Procedure / Test protocol / Skill test trial / Measure / Instruments

In the research process, we used theoretical analysis of scientific and methodological literature, study, analysis, systematization, and generalization of data from literary sources, the revised system of control exercises by O. Obrazhey was used to assess the swimming fitness of junior pupils in the conditions of a school sports club, and methods of mathematical statistics.

To diagnose the formation of primary schoolchildren's swimming fitness in the conditions of a school sports club

we took as a basis an innovative methodology proposed by Obrazhei (2023) aimed at the assessment of swimming skills of primary schoolchildren in the conditions of summer health camps. Along with the use of the recommendations offered by the author concerning the 5-point assessment of results of performance of control exercises (Obrazhei, 2023), we revised the system of the specified exercises according to the contingent of participants and conditions of realization of the educational and training process. We have simplified separate test exercises taking into account the reduced level of swimming fitness of a contingent of junior pupils. In particular, the following exercises were removed from the control exercises: "Jumping into the water", "Sliding and footwork" and "Sliding and handwork". Instead, the following exercises have been added: "Skill of entering water", "Reaction to unsupported position in water" and "Reaction to water getting into eyes or nose". In addition, we have added the "Ability to perform a float" as a basic exercise for teaching swimming to the control exercises.

A total of 10 indicators were evaluated using a 5-point system, namely:

- signs of hydrophobia: 1 – the child refuses to enter the water; 2 – enters the water after long persuasions; 3 – enters the water with the coach; 4 – enters independently, but keeps near the side; 5 – absent;
- face submersion in water: 1 – the child is afraid; 2 – partially submerges after the persuasion of the coach; 3 – dips the face (eyes closed); 4 – dips the head (eyes closed); 5 – dips the head, eyes open;
- squatting in water: 1 – refuses; 2 – squats together with the coach (water level up to the chest); 3 – squats independently, the water level is up to the neck; 4 – squats with the head fully immersed, eyes closed; 5 – independently squats, dives;
- the skill of entering the water: 1 - refuses to jump from the side; 2 – jumps, holding the side with his hands; 3 – jumps with the coach; 4 – independently jumps from the side; 5 – jumps independently with repulsion from the side;
- a reaction to the condition of an unsupported position in the water (or a reaction to the loss of balance, falling, or lack of support): 1 – the child panics, and refuses to continue the exercise; 2 – the child is nervous, needs the coach's support; 3 – the child is alert, restrained or irritated; 4 – the child is calm, relaxed; 5 – the child is self-confident;
- reaction to water getting into the eyes or nose: 1 – the child panics, and refuses to continue the exercise; 2 – the child is nervous and continues the exercise after the help or persuasion of the coach; 3 – the child is alert, restrained or irritated; 4 – the child reacts calmly; 5 – the child is self-confident, plays;
- underwater breath holding: 1 – breath hold only on land (up to 10 s); 2 – breath hold only on land (up to 15-20 s); 3 – holding breath in water (up to 5 s); 4 – breathing delay up to – 10 s; 5 – breath hold for more than 15 seconds;
- the ability to perform a floater: 1 – refusal to perform; 2 – execution of the float is "uncoordinated"; 3 – a floater without gripping the legs for up to 5 seconds; 4 – the floater is performed correctly – up to 10 s; 5 – the floater was performed correctly for more than 15 seconds;

- the ability to perform an asterisk: 1 – refusal to perform; 2 – execution of the asterisk “uncoordinated”; 3 – an asterisk with lowered legs for up to 5 seconds; 4 – the asterisk is executed correctly – up to 10 s; 5-star made correctly for more than 15 seconds;
- the ability to push off and slide: 1 – inability to group near the turning wall, no sliding; 2 – poor grouping, there is a weak undirected repulsion; 3 – sliding after repulsion up to 2 m; 4 – sliding with the correct position of the body after the correct push-off, push-off up to 4 m; 5 – sliding with the correct body position after a correct push-off of more than 5 m.

Individual assessments of the initial swimming readiness of junior school children in the conditions of a school sports club were calculated as the sum of points for all indicators, and group assessments were calculated as the sum of points for each of the indicators (Obrazhei, 2023).

Reliability of the system of evaluation of primary school pupils’ swimming fitness in conditions of school sports club was confirmed by means of Cronbach’s Alpha coefficient, which was 0.879 and Split-half reliability, which was 0.911.

Data collection and analysis / Statistical analysis

The following methods of statistical analysis were used: descriptive statistics, rank variance analysis for repeated measurements, and dynamic series analysis (Byshevets, 2019, 2021).

Descriptive statistics. Since the experimental data were obtained in an ordinal scale, the average values are presented using the median (Me) and 25 and 75 percentiles.

Rank variance analysis. To compare indicators and general evaluations of initial swimming skills in junior school children, depending on the stage of the training, the χ^2 -Friedman multiple rank test was used. At the same time, the Wilcoxon T-test was used to compare the initial swimming skills between the test periods - a non-parametric test for comparing dependent samples with the calculation of the z-statistic.

Analysis of dynamic series. In the assessment process the dynamics of initial swimming skills of junior school children in the conditions of a sports club in an educational environment, traditional methods analysis of time series with the calculation of indicators of a dynamic series were used.

The reliability analysis of the test was aimed at assessing the reliability of testing the initial swimming readiness of junior school children in the conditions of a school sports club. The internal consistency of the test elements was determined according to the criteria of Cronbach’s alpha and Gutman’s plan reliability. Using the obtained data we proved that testing each of the indicators provides an assessment of the initial swimming skills of children of primary school age.

Differences between indicators were considered statistically significant at the level of significance $\alpha=0.05$ ($p < 0.05$). If the calculated p-value was less than 0.0001, it was presented as $p < 0.05$. In other cases, its value is given, rounded to the nearest thousandth.

The research material was processed using a package of special computer programs MS Excel and STATISTICA 10.0 (StatSoft, USA).

Results

For timely correction of pedagogical influence, In the process of design of training classes for children of primary school age in a swimming sports club, the phase of initial swimming training and determining the effectiveness of the phased formation of new motor skills and abilities in an aquatic environment requires special attention. The estimation of primary schoolchildren’s swimming fitness in the conditions of school sports club was carried out by means of the revised methodology of Obrazhei (2023) taking into account the reduced swimming skills of participants of the research during the entrance, operational and stage control.

We turned out that certain indicators for assessing the initial swimming skills of junior schoolchildren, such as squats in the water, the ability to perform a float and an asterisk, and especially holding the breath in the water and the ability to push off and slide, were low. On the other hand, the rate of growth dynamics of such indicators as the reaction to the unsupported position in the water and holding the breath in the water turned out to be lower compared to other indicators. At the same time, face diving and water squatting increased at an accelerated rate. However it should be stressed, that all the remaining indications were statistically significant ($76.6 < \chi^2$ -Fridman < 122.94 , de ; $p < 0.05$) grew (Fig. 1).

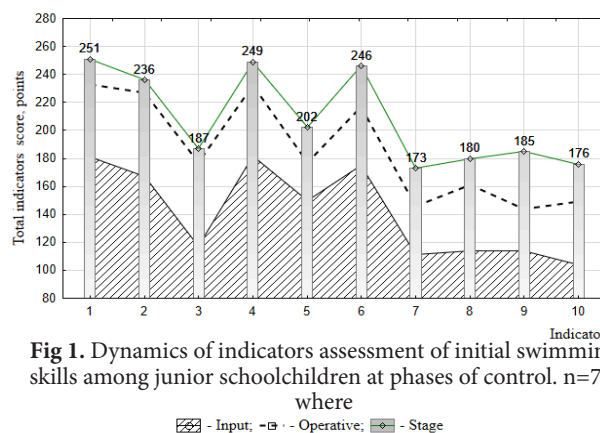


Fig 1. Dynamics of indicators assessment of initial swimming skills among junior schoolchildren at phases of control. n=73, where

▨ - Input; - - - Operative; — Stage

1 – signs of hydrophobia; 2 – immersion of the face in the water; 3 – squats in the water; 4 – water entry skill; 5 – reaction to unsupported position in the water; 6 – reaction to water entering the eyes / nose; 7 – breath holding in water; 8 – the ability to perform a float; 9 – the ability to perform an asterisk; 10 – the ability to push off and slide; the meaning of the lines

It was established that, for example, reaching the maximum group scores were taken by junior schoolchildren for the following indicators: “Signs of hydrophobia” (251 points), “The skill of the entry into the water” (249 points) and “Reaction to water Getting in the eyes / nose” (246 points), and minimum – for the indicators “Breath holding under the water” (173 points) and “Ability to push off and slide” (176 points) (Fig. 1).

Individual initial swimming skills of junior pupils at the input stage were estimated from 10 to 36 and the average formation of initial swimming skills was 18.63 ± 5.10 points, during the operational control – from 13 to 40 – 24.75 ± 5.47 points, and at the end of the research – from 20 to

Table 1. Analysis of growth of group indicators of assessment initial swimming skills in schoolchildren (n=73)

| Indicator / Control phase | The control stage | | | The value of the Friedman criterion | Average level of the dynamics series, points | Growth Δ , % / absolute growth, point | | | Average growth rate, % | Average absolute increase, points |
|---|-------------------|-------------|-------------|-------------------------------------|--|--|------------|------------|------------------------|-----------------------------------|
| | I | O | S | | | I/O | O/S | I/S | | |
| Signs of hydrophobia | 181 | 233 | 251 | 113.26* | 221.7 | 28.7 / 52 | 7.7 / 18 | 38.7 / 70 | 17.8 | 35 |
| immersion of the face in water | 167 | 227 | 236 | 122.35* | 210.0 | 35.9 / 60 | 4.0 / 9 | 41.3 / 69 | 18.9 | 35 |
| Squats in water | 117 | 177 | 187 | 122.86* | 160.3 | 51.3 / 60 | 5.6 / 10 | 59.8 / 70 | 26.4 | 35 |
| Water entry skily | 182 | 232 | 249 | 108.63* | 221.0 | 27.5 / 50 | 7.3 / 17 | 36.8 / 67 | 17.0 | 34 |
| for the reaction to the unsupported position in the water | 150 | 176 | 202 | 76.53* | 176.0 | 18.0 / 27 | 14.1 / 25 | 34.7 / 52 | 16.0 | 26 |
| reaction to water entering the eyes/nose | 175 | 217 | 246 | 107.69* | 212.7 | 24.0 / 42 | 13.4 / 29 | 40.6 / 71 | 18.6 | 36 |
| Underwater breath holding | 111 | 146 | 173 | 93.52* | 143.3 | 31.5 / 35 | 18.5 / 27 | 55.9 / 62 | 24.8 | 31 |
| Ability to perform float | 114 | 161 | 180 | 104.94* | 151.7 | 41.2 / 47 | 11.8 / 19 | 57.9 / 66 | 25.7 | 33 |
| Ability to perform asterisk | 114 | 144 | 185 | 107.35* | 147.7 | 26.3 / 30 | 28.5 / 41 | 62.3 / 71 | 27.4 | 36 |
| Ability to push off and slide | 104 | 149 | 176 | 110.25* | 143.0 | 43.3 / 45 | 18.1 / 27 | 69.2 / 72 | 30.1 | 36 |
| Total score, points | 1360 | 1807 | 2030 | 146.0* | 1732.0 | 32.9 / 447 | 12.3 / 223 | 49.3 / 670 | 22.2 | 335 |
| Mean (x \pm SD), points | 18.63; 5.10 | 24.75; 5.47 | 27.81; 4.80 | | | | | | | |

Note: I/O, O/S, I/S – comparative analysis of the indicators depending on the phase of control, where I – initial, O – operational, S – staged control; * - with a proven statistically significant increase in the indicator according to the χ^2 -Friedman criterion at the p-level of the significance of 0.05 and taking into account the degrees of freedom $df = 2$.

44 points – 27.81 ± 4.80 points. The statistically significant growth of primary schoolchildren's swimming skills under the influence of swimming lessons in school sports club was proved (χ^2 -Friedman = 146; $df=2$; $p<0.05$). Statistically significant increase of individual indicators for the period between input and operative ($T=0$; $z=7,4244$; $p<0,05$) and between operative and stage control ($T=0$; $z=8,4270$; $p<0,05$) was revealed (Table 1).

As you can see from Table 1, during the study period, the average indicators of the initial swimming readiness of junior schoolchildren in the conditions of a school sports club ranged from 143.3 points for the ability to perform an asterisk to 221.7 points for signs of hydrophobia. It was revealed that at the end of the study, compared with the initial stage of the average growth rate of the indicator "The ability to push off and slide" in junior schoolchildren, was the maximum and amounted to 30.1%. At the same time, the minimum average growth rate was 16.0%, which was revealed by the reaction to an unsupported position in the water.

The analysis of changes in the indicators of the initial swimming readiness of younger schoolchildren in the conditions of the school sports club made it possible to trace the positive dynamics at each stage of control. Comparing the results of operational and input control, we found that the minimum increase of 18.0% was observed according to the results of the reaction to the unsupported position in the water, and the maximum – 51.3% – to squats in the water.

At the same time, the minimum increase at the stage control compared to the operational one was observed in the indicator "The ability to push off and slide" and amounted to

4.0%, and the maximum of 28.5% was stated in the ability to perform an asterisk. And at the end of the study, compared with the beginning of the increase in the indicators of basic swimming readiness of younger schoolchildren in the conditions of a school sports club, it varied from 34.7% in response to an unsupported position in the water to 62.9% in the ability of children to push off and slide in the water. We determined that the average absolute increase in indicators, showing how they changed on average at the control phases, ranged from 26 to 36 points (Table 1).

A statistically significant increase of all indicators of primary school pupils' swimming fitness in conditions of a school sports club for the period of research was established ($76,5 < \chi^2$ -Friedman $<122,9$; $df=2$; $p<0,05$).

At the same time, a statistically significant increase in the general assessment of pupils' swimming fitness for the period of research was proved (χ^2 -Friedman = 146,0; $df=2$; $p<0,05$). Besides, statistically significant increase of general assessment of swimming fitness of school swimming club visitors at the stage of operative control compared to the input one ($T=0$; $z=7,4244$; $p<0,05$), at the stage of stage control compared to the operative one ($T=0$; $z=7,4244$; $p<0,05$), and also at the stage of stage control compared to the input one ($T=0$; $z=8,4270$; $p<0,05$) was revealed.

Discussion

The issue of improving the health of primary school children has been a priority in numerous studies in recent years (Kemeryte-Ivanauskiene et al., 2022; Komaini et al.,

2022). The search for a solution to this issue has led to the discovery of the prospects for the implementation of the club form of primary school children's classes and the widespread use of swimming equipment (Lyashenko et al., 2012).

Instead, to achieve the maximum health effect, there is a need for systematic monitoring of children's swimming fitness, which makes the educational and training process manageable (Hartati et al., 2022).

In the course of the research differentiation of the content of children's swimming training was determined as one of the leading at the initial stage of training, where it is formation of the skills necessary for further stages (Bondar et al., 2009; Goncharova et al., 2020; Ivanyshyn et al., 2021; Santos-Garcia et al., 2022). It should be noted that the relevance of differentiating the content of the educational and training process of younger schoolchildren is aggravated in the conditions of the formation of groups of different ages, which is common when completing groups in school sports clubs (Limarenko, 2014; Oliynyk, 2020; Richards, 2022). Therefore, grouping children is important in building training classes, taking into account the level of their initial swimming readiness.

Studying and analysing the existing methods of pedagogical control, we drew attention to certain methods for assessing the initial swimming skills of younger students.

Regarding the assessment of primary schoolchildren's swimming fitness, scientists propose different methods of its evaluation (Limarenko, 2014). However, the existing methods assumed that pupils have already formed swimming skills. Therefore, to solve the tasks, in the course of the study, we revised the methodology for assessing the initial swimming skills of Obrazhei (2023) and took into account that at the beginning of the study not all participants could stay in the water, and some children had pronounced signs of water fear. At the same time, changes were made to the system of assessment of initial swimming skills by Obrazhey (2023), which are related to the avoidance of situations of water fear and direct assessment of the formed swimming skill. The tests of jumping into the water, the ability to slide and work with feet, the ability to slide and work with hands, the ability to swim in coordination were not used, which, in our opinion, creates an additional stressful situation for the contingent of children with no swimming skills. The reliability of the obtained system for assessing children's primary skills was proved by the Cronbach's alpha coefficient, which was 0.879.

Therefore, the swimming skills of school sports club visitors were assessed according to the indicators proposed by us during the entrance, operational and stage pedagogical control. The offered method of assessment allows to create an idea of the level of swimming fitness of children both at the initial stages of training and dynamics of training. At the same time the dynamics of those indicators which are leading at the initial stages of mastering swimming skills is controlled.

It is worth emphasizing that the study confirmed the data of Obrazhei (2023) about the low level of primary swimming skills in primary school children. However, the comparison of our results with those of Obrazhey (2023) is complicated by the different duration of the pedagogical experiment and its focus.

The most interesting from the point of view of assessment of initial swimming skills is proposed by Vogt & Staub (2020). It covers 19 aquatic specific skills and most accurately reflects a set of children's motor skills in swimming

at the initial stages of classes. However, in our opinion, this system needs additional systematization and separation of the most important indicators due to the large time spent on its implementation.

Comparison of the obtained results with the research of Moura et al. (2021) proves that the authors used more control tests to assess the assessed aquatic motor skills (17 aquatic specific skills). At the same time, a significant number of motor tests according to this methodology are difficult to assess the initial level of swimming in children, namely feet-first entry, head-first entry, autonomy in a deep pool (legs and arms displacement), vertical buoyancy in deep water, deep water immersion. The actual data obtained in the "water entry skill" test (Moura et al., 2021) correspond to our results and prove their high values compared to other abilities. Instead, unlike the means of influence proposed by Moura et al. (2021), our study achieved statistically significant changes in the indicators of "immersion of the face and eye-opening", which is associated with significant attention to the use of means of reducing water fear and adaptation to the aquatic environment. We also support the author's opinion about the need to develop skills related to buoyancy and gliding in children at the initial stage of swimming training.

The main result of the study was to prove the positive impact of swimming lessons in a school sports club based on the study of the dynamics of individual and group indicators of swimming fitness of schoolchildren. Thus, it turned out that at the time of pedagogical control, the average indicators of pupils' swimming fitness ranged from 143 points for the ability to push off and glide in water to 221.7 points for signs of water fear. The maximum average growth rate of 30.1% was recorded for the children's ability to push off and glide in water, i.e. on average, this indicator increased by 30.1% in stages. At the same time, the lowest average growth rate of 16.0% was recorded for the indicator of pupils' reaction to unsupported position in water. This result can be explained by insufficient self-control of movements of school swimming club visitors, as well as by insufficient level of their physical fitness. Therefore, it is necessary to establish at what moment of the motor action a child makes a mistake and to determine what physical qualities need to be developed for the correct performance of the movement. Ago, the task is to develop additional exercises aimed at developing certain physical abilities in pupils of the school swimming club, which would provide an accelerated pace of improvement of the motor action "unsupported position in water". On the other hand, the reduced average growth rate of the indicator "skill of entering water", which amounted to 17.0%, is explained by the high assessment of children's skills at the stage of entrance control. In addition, it was found that such indicators as reaction to water getting into eyes/nose, ability to perform asterisk and ability to push off and slide in water on average increased by 36 points at each stage of pedagogical control during the study period.

At the same time, the study of literature data proves the existence of an integrated approach to the assessment of children's swimming fitness, for example, the system Scale to Measure Aquatic Competence in Children by Moreno-Murcia and Ruiz-Pérez (2008), Moreno-Murcia et al. (2020), which includes 23 items divided into three dimensions (socio-affective, cognitive, and motor). This approach of the author creates a comprehensive perception

of the child's physical condition and is not limited to the physical component. This approach can be considered as a prospect for future research.

Thus, the obtained theoretical and practical provisions of the assessment of children's initial swimming fitness can become an important tool for controlling the educational and training process in swimming.

Conclusions

On the basis of the theoretical analysis of the literature and taking into account own pedagogical experience, the indicators that determine the initial swimming fitness of visitors of the school sports club are proposed. In accordance with the main stages of mastering swimming skills, three stages of control are provided (input, operational, stage). It is established that under the influence of introduction of the offered organizational and methodical approaches to the construction of training classes of primary school age children in a sports club on swimming statistically significant ($p < 0.05$) increased individual and group indicators of initial swimming fitness of children. It was determined that the increase of initial swimming skills for the period of research was 49.3 %, and the average rate of increase was 22,2 %. Except for the indicator "Ability to perform a star", indicators of children's initial swimming skills in the period between operational and entrance control grew at a faster pace in comparison with the period between stage and operational control. The maximum average growth rate of children's initial skills assessment at the end of the study compared to the beginning was recorded for the ability to push off and slide (30.1%), the ability to perform the star (27.4%), and squatting in the water (26.4%).

It is possible to state that pupils demonstrated positive dynamics by all indicators of swimming fitness. Statistically significant ($p < 0,05$) improvement of all indicators of their swimming fitness for the studied period was proved, and also statistically significant ($p < 0,05$) increase of general assessment of swimming fitness of visitors of school sports club on swimming. Besides, statistically significant ($p < 0.05$) increase of pupils' swimming fitness at the stage of operational control compared to the input one and at the stage of stage control compared to operational control was recorded. Statistically significant ($p < 0.05$) improvement of primary school pupils' results of control exercises at all stages of diagnostics of their initial swimming skills formation confirms positive influence of swimming lessons in school sports club.

Conflicts of interest

The authors declare no conflict of interest.

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ДИНАМІКА ПОЧАТКОВОЇ ПЛАВАЛЬНОЇ ПІДГОТОВЛЕНОСТІ МОЛОДШИХ ШКОЛЯРІВ У ШКІЛЬНОМУ СПОРТИВНОМУ КЛУБІ

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Авторський вклад: А – дизайн дослідження; В – збір даних; С – статаналіз; D – підготовка рукопису; Е – збір коштів

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Мета дослідження – оцінити вплив занять плаванням у шкільному спортивному клубі на початкову плавальну підготовленість дітей молодшого шкільного віку.

Матеріал і методи. У дослідженні взяли участь 73 учні молодших класів, яке проводилося на базі шкільного клубу спортивного плавання «Sportrend». У процесі дослідження використовувалися теоретичний аналіз науково-методичної літератури, для оцінки плавальної підготовленості молодших школярів в умовах шкільного спортивного клубу використано систему контрольних вправ О. Ображей, переопрацьовану із врахуванням контингенту дослідження, методи математичної статистики.

Результати. Запропоновано методику оцінки плавальної підготовленості молодших школярів в умовах шкільного спортивного клубу. Темп динаміки зростання таких показників як реакція на безпорне положення у воді та затримка дихання у воді, виявився нижчим порівняно з іншими показниками. Водночас, показники занурення обличчя у воду та присідання у воді зростали пришвидшеними темпами. Середній приріст початкових навичок плавання у дітей за період дослідження склав 49,3 %, а середній темп приросту становив 22,2 %. Максимальний середній темп приросту показників оцінки початкових навичок дітей наприкінці дослідження у порівнянні з початком зафіксовано за умінням відштовхуватись і ковзати (30,1 %), умінням виконувати зірочку (27,4 %), присіданням у воді (26,4 %).

Висновки. Статистично значуще ($p < 0,05$) покращення результатів виконання молодшими школярами контрольних вправ на усіх етапах діагностики сформованості їх початкових плавальних навичок підтверджує позитивний вплив занять плаванням у шкільному спортивному клубі.

Ключові слова: плавання, діти молодшого шкільного віку, спортивний клуб, оцінка, плавальна підготовленість.

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