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# INFLUENCE OF MOTIVATIONAL TRAINING ON THE LEVEL OF YOUNG SWIMMERS' PHYSICAL FITNESS AND INTRINSIC MOTIVATION FOR ATTENDING SWIMMING LESSONS

Oleg GRETSKY, Bogdan MYTSKAN

*Vasyl Stefanyk Precarpathian National University, Ukraine*

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## Key words:

- motivation,
- young athletes,
- special physical training.

## Abstract:

The research article outlines the results of psychological and pedagogical experiment, aimed at rise of level of young swimmers' motivation in terms of task-oriented improvement of special physical and swimming training. It has been revealed that the total indirect psychological effects, provided by the suggested methodology, made it possible to undoubtedly increase the indices of athletes' fitness at the initial stage of their training within a short period of time.

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## INTRODUCTION

Motivation of sporting activity is determined by sports psychologists as a special condition of personality of an athlete, ensuring the basis for forming and realizing the specific goals, consisting in achievement of the sport result, which is highest possible at the given level of training [3, 5, 7, 9, 14, 18]. It has been proven that motivation influences the nature of all processes of sporting activity (body's response to physical exercise, recovery, mastery of technical elements, display of volitional qualities etc.). An important peculiarity of sport motivation is its direct impact on the result of competitive activity, which is known to depend on all components of athlete's fitness (general and special physical, technical, tactical, functional training) [12, 18, 19].

As indicated in scientific literature on sports psychology, the development and functioning of sport motivation require: 1) positive attitude to sport and ability to cope with difficulties in sporting activity; 2) high level of emotional and volitional qualities, persistence, resoluteness, self-confidence, quick-wittedness, restraint; 3) sense of collectivism and its display (mutual aid, mutual assistance etc.). Based on the foregoing, it is necessary to work out corresponding methods, aimed not only at support, but also at constant increase of sport motivation.

**Purpose of this research work** – to elaborate and test efficiency of methods of motivation for attending swimming lessons at the initial stage of training, also to define its impact on improvement of young swimmers' special physical training.

## RESEARCH METHODS

In order to achieve this purpose, we applied theoretical analysis, modelling, pedagogical experiment, testing, mathematical statistics methods. Sixty young swimmers of Children and Youth Sports School №2 of Ivano-Frankivsk city participated in the experiment (30 – control group and 30 – experimental group). According to the test results (October-November 2010), the initial level of special physical fitness did not differ considerably in these two groups. Repeated tests were carried out in April 2011, after our motivation methods were used.

Our methods of young swimmers' motivation for attending swimming lessons at the initial stage of training were based on the following instructional techniques: 1) evaluation of physical exercises by their technical level, followed by independent determination of personal liabilities; 2) combined application of individual and team intragroup competitions; 3) transformation of trainer's tasks into the system of personal ambitions; 4) holding discussions about key physical qualities of a swimmer (muscular strength, flexibility, endurance); 5) familiarization with the structure and technique of exercises, aimed at developing the main physical qualities. In addition, we have specified, what exactly personal liabilities are undertaken by each young sportsman to be successful (by the way, almost all trainees set the maximum task before themselves), and offered the children to write them down in a sports diary, as well as the tasks, performed at the lessons and during independent training on days-off. Moreover, special attention was paid to emotional component of training sessions, namely: 1) training on "land" included musical accompaniment; 2) exercises were deprived of cliché, as both the content and dosage of load were changed; 3) trainees were involved in games – outdoor games and swimming relays as unsurpassed means of enhancing athletes' emotional state, improving their physical qualities, check of the level of mastery of certain motor skills; 4) an "anarchy day" was held every two weeks (the trainer appoints two young trainees, who will independently conduct a training session on "land", two others – sessions in a swimming pool, using their favorite exercises and games, while the trainer will act as an observer).

## **RESEARCH RESULTS**

The data, characterizing the level of influence of instructional techniques of young athletes' motivation, applied by us for them to succeed in training process, are given in Table 1.

As shown in Table 1, undoubtful changes of indices were observed in the course of testing, characterizing strength abilities. Thus, as concerns "arm flexion and extension in supported side-lying position", the results of experimental group were 18% (boys) and 82% (girls) higher, than those of control group. As for pulling up, this difference was respectively 90% and 167%. As compared with the control group, the results were 115% (boys) and 155% (girls) in exercise "angular sits-down". The flexibility tests (turning shoulder joints and bending forward) and speed-strength abilities tests (long standing jump) demonstrated no observable changes either for boys or for girls.

Table 2 shows the results of indices change in the tests, characterizing specific swimming training without sex differentiation. Thus, the results of the experimental group rose by 68% in exercise "continuous crawl swimming on the breast", as compared with the control group; this difference was 42% in the second test ("continuous two-sided crawl swimming with breathing"). The distance increased by 48% in a diving test. The distance increased by 23% in exercise "continuous swimming with legs on the back".

In a combined test young athletes were offered a number of tasks, worked out by T.M. Absalyamov. This test was intended for the groups that underwent prior basic training of second year, in order to determine physical fitness of 8-10-year-old swimmers. The test consists of 5 arm flexions and extensions in supported side-lying position, 5 full sits-down; a start jump and 25-meter swimming, 5 exhales into water at the shallow part of pool and 25-meter finishing swimming. The entire complex was performed continuously and as quickly as possible.

Undoubted changes were also observed here (the result rose by 4.0% comparing with the control group (Table 3).

The modified technique, described in "Diagnostics of Motivation for Sporting Activities" by R. Cattell, was used to define the result of experimental methodology impact on the motivation level.

The methodology consists of 20 statements and suggests optional answers.

The survey indices were calculated in accordance with the criterion, in which "yes" means a positive answer (true), and "no" means a negative one.

Yes	1, 2, 5, 6, 8, 11, 12, 14, 17, 19
No	3, 4, 7, 9, 10, 13, 15, 16, 18, 20

We accrue 1 point for each coincidence with the criterion. The higher the total score, the higher the intrinsic motivation to attend lessons. External motivation prevails in case of low score.

The Rulon formula was used to calculate reliability and accuracy, the Spearman-Brown formula was used to calculate the coefficient of reliability and conformity of the whole test.

The indices (reliability and accuracy), obtained by the Rulon formula, were 0.913; reliability and conformity (by the Spearman-Brown formula) were 0.905.

The following indices were calculated in addition:

- median = 10
- standard deviation = 6
- minimum score = 0
- maximum score = 20

The analysis of results was interpreted as follows:

0-10 – external motivation;

11-20 – intrinsic motivation.

The following specified limits were used to define the level of intrinsic motivation:

0-6 – low level of intrinsic motivation;

7-13 – medium;

14-20 – high.

The first survey took place in October 2010, the final survey – in April 2011. Repeated survey was held in 2-3 weeks. As indicated by the April survey, the intrinsic motivation level increased in both groups during the experimental period. The increment of girls' intrinsic motivation was 20,9%, the increment of boys' intrinsic motivation was 28,8%, while in the experimental group it was 56,2% (girls) and 53,7% (boys) (see Table 4).

It would be remarkable to mention, that girls' intrinsic motivation was higher, than that of boys in both groups at the beginning of the experiment and at its finishing stage.

## CONCLUSION

It was established, that task-oriented influence on motivational sphere of young athletes' activity at the initial stage of training by means of indirect psychological effects, provided by the developed experimental methodology of motivational training, made it possible to mobilize children for constant physical self-improvement, leading to undoubtful increase of special physical and swimming training indices.

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