Journal of Physical Education and Sport ® (JPES), 16(2), Art 59, pp.374 - 379, 2016
online ISSN: 2247 - 806X; p-ISSN: 2247 – 8051; ISSN - L = 2247 - 8051 © JPES

Original Article

Program of personality structure priority component development in Nordic Combined

ANDRIY KAZMIRUK[1], OREST STEFANYSHYN[2], VIKTOR BEREZHANSKYI[3], OLHA ZINKIV[4], VOLODYMYR BANAKH[5]
[1,2,3,4] Department of Winter Sports, Lviv State University of Physical Culture, UKRAINE
[5] Department of of Medical and Biological Basis of Physical Education, Kremenets' Regional Humanitarian and Pedagogical Academy of Taras Shevchenko, UKRAINE

Published online: June 25, 2016
(Accepted for publication May 06, 2016)
DOI:10.7752/jpes.2016.02059

Abstract:
The paper describes the semantic and organizational aspects of the introduction of psychological training in the annual cycle of training sessions of Nordic combined skiers on the stage of specialized basic training. Research objective: we sought to devise and experimentally test the effectiveness of the program of psychological preparation of Nordic combined skiers on the stage of specialized basic training. Research methods: theoretical analysis and synthesis of scientific data and methodological literature including information on the Internet; pedagogical observation; forming pedagogical experiment; psychodiagnostic methods, methods of mathematical statistics and author's program of psychological training. Materials: in general, 20 Nordic combined skiers aged 15-17 years were engaged in the research. There were 10 athletes both in the experimental and control groups. The research was conducted during the annual macrocycle of athletes training. The program of psychological preparation of Nordic combined skiers was aimed at the development of important psychological qualities essential for good sport result. It has been established that psychological training, which was implemented in the training process of the experimental group, enabled a significant increase in the level of motivation to succeed and reduction in the level of motivation to avoid failures; as well as to improve emotional resistance to stress factors in terms of training and competitive activities. Furthermore, it improved sport results in ski jumping by 10% at $p = 0.028$ as compared to the control group of athletes.
Keywords: Nordic combined skiers, psychological training, qualities, psychological preparation.

Introduction.

The main objectives of psychological preparation of Nordic combined skiers are: development and formation of personality structure qualities, which ensure efficient performance of motor actions and techniques that are typical for ski jumping and cross-country skiing; increasing the reliability and performance under extreme conditions of competitive activity viewing the requirements of sports practice; the formation of high emotional stability, variability and rational execution of motor actions.

The curriculum analysis for sports schools specializing in Nordic Combined has shown that psychological preparation is important in preparing the athletes and their perfomance capacity. However, apart from setting important problems, it almost does not show the ways of their solutions; it does not specify a sequence of applying certain psychological means and forms of their organisation (Fomin, S. K. et al. 2001). In our opinion, the optimization of the training process should be carried out not only by increasing the intensity and scope of use of special means and methods of Nordic combined skiers physical training, but as well as it should include a complex of interrelated means and methods of psychological preparation, as reserves of human body viewing mental abilities are much bigger than physical ones (Farmahey, O. I. et al. 2012).

The development and formation of these qualities is an important condition for high performance and reliability of training and competitive activity of an athlete (Stambulova, N. B.1988). However, the peculiarities of these qualities have not been studied enough. Thus, we face the obvious need of psychologically based preparation system in Nordic Combined, which would serve as a basis for the development of basic mental qualities of a Nordic combined skier.

A number of experts consider psychological training as a special tool that helps participants manage their own behavior and emotions (Mente, M. 2001; Torn, K. et al. 2001; Zaitseva, T. V. 2002; Malyutina, K. L. 2004; Klymchuk, V.O. 2006). As for psychological training, it is considered to be a research object that covers the general laws of personality structure components development, regardless of their "conceptual and procedural tendency." Psychological training as one of the most effective means of group influence, attracts attention of practitioners in the field of sport (Kolosov, A. B. 2008; Kurylyuk, S. I. et al. 2010). At the same time there is a significant gap in the theoretical understanding of the results of empirical research. The origins of

Corresponding Author ANDRIY KAZMIRUK, E-mail: andriy.kazmiruk84@gmail.com

many problems that arise when using psychological training lie in their methodological justification. In this regard, for development of priority personal qualities of an athlete and successful perfomance in training and competitive activity in specific conditions (usually extreme ones) peculiar to Nordic Combined it is necessary to use specially organized programs of psychological training (Kazmiruk, A. 2011; Klymchuk, V.O. 2006).

The research purpose is development and experimental verification of the program efficiency of psychological preparation of Nordic combined skiers on the stage of specialized basic training.

Materials & methods

In the course of study we have used: theoretical analysis and synthesis of scientific-methodical literature including information on the Internet; pedagogical observation; forming pedagogical experiment; psychodiagnostic methods (method of diagnosing of personality motivation to succeed "T. Elyers"; methods of diagnosing personality motivation to avoid failure "T. Elyers", Schubert's method of diagnosing degree of readiness to risk, questionnaire by Frester "Stress symptom test" and research of display of strong-willed qualities), methods of mathematical statistics: for statistical processing of results methods of nonparametric statistics were applied; for bound complexes - Wilcoxon method, and for unbound ones - method of Mann - Whitney. Processing was conducted using functions «Comparing two dependent samples (variables) → Wilcoxon Matched Pairs Test» and «Comparing two independent samples (groups) → Mann-Whitney U Test» of the package «Nonparametric Statistics» program «Statistica», and the author's program of psychological training. To achieve this goal a comparative pedagogical experiment involving 20 athletes aged 15-17 years was conducted. The study was conducted on the basis of sports schools of town Kremenets, villages Vorohta and Verkhovyna in the period from 1 May 2011 to 1 April 2012. The athletes were divided into equal experimental and control groups, which included 10 athletes each. Athletes of control group trained according to the current curriculum of training for Nordic Combined sports schools at the stage of specialized basic training. In the training process of experimental group the author's program of development of personality structure priority components based on psychological training was introduced. It lasted for 11 months and 1 class per week. Duration of the class 1 hour and 30 min. Training programs of athletes both of experimental and control groups were identical in terms of intensity and volume of the load. The total number of hours of classes for athletes of experimental and control groups was the same. Developing a program of psychological training of 15-17 year-aged Nordic combined skiers we used programs by Voronov I. A and Kurylyuk, S. I., who are specialists in the development of training programs for athletes (Voronov I. A. 2005; Kuryliuk S. I. 2008). The basis of the training formed such instructional techniques: analysis of the components of training and competitive process of athletes; varying the structure of tasks; construction of new possible solutions.

The structure of training consisted of periods (Table 1). Each of the existing training period included stages of its implementation. In the process of conducting classes in these stages the focus of attention was on psychological technique, as it allows to manage and improve mental functions.

Table 1.

The program structure of development of significant components of the personality structure of a Nordic combined skier

№	Psychological training period	The objectives of the program	number of classes	Duration, hours
1	Initial a) Introduction b) Theoretical	Creating an atmosphere of trust and self-disclosure. Formation of training purposes. Removing the mental stress of a training course for building motivation to engagement in psychological training. Getting to know the basics of motivation to succeed, inner motivation and emotions.	2 3	7,5
2	Preparatory (Basic)	Teaching how to formulate objectives for training and competitive activities. Mastering the technique of muscle groups relaxation. Formation of emotional stability, confidence in their own abilitities. The development of the ability to make up an action program in difficult stressful situations.	10	15
3	Forming	Formation of motivation to succeed, responsibility for professional development. Improvement of techniques for muscle groups relaxation and mobilization. Learning heat accumulation sensations in the body parts. Development of self-esteem, self-reflection, the ability to switch attention, the ability to play over in mind of positive competitive situations.	18	27
4	Consolidation	Teaching the ability to freely manage their own emotions, movements volitional processes (e. g. in competitive situations). The ability to achieve goals and set tasks.	10	15
5	Summarizing or Final	Formation of positive judgments about performance. Creating a positive mood for the future.	3	4,5
Hours in general			46	69

Research results.

Analysis of the test results before the pedagogical experiment shows that athletes of the control and experimental groups had no significant differences in mental indicators and athletic performance and ($p > 0.05$) (Table. 2, Tab. 3, Tab. 4).

As a result of the experiment, when comparing the results of the motivational component, namely the motivation to succeed, motivation of avoiding failure and the willingness to take risks, we determined that the dynamics of these indicators viewing the test results was of a positive nature in the control and the experimental groups (Table. 2). Analysis of the obtained results shows that the increase in the level of motivation for success is observed in both groups. In the control group, the increase was 1% ($p = 0.091$). In the experimental group, the increase was 22.4%, as evidenced by changes in the level of significance ($p = 0.012$). Inter-group difference in the increase of this parameter in the experimental group of Nordic combined skiers was 21.4% ($p = 0.002$). After psychological training it has been found out that in Nordic combined skiers of both groups the level of motivation of avoiding failure (motivational component) decreased. Therefore, the improvement occurred in both groups. The level of this indicator in the experimental group improved by 24.5% ($p = 0.028$), whereas in the control only by 5.5% ($p = 0.043$). But at the end of the experiment the value of inter- group differences reached 19.5% at ($p = 0.019$), showing a more significant shift for this indicator of athletes in the experimental group.

Table 2. The dynamics of the motivational component indicators and volitional qualities of Nordic combined skiers' personality structure

Indicators	Experimental group			Control group			
	Before **M±SD**	After **M±SD**	**p¹**	Before **M±SD**	After **M±SD**	**p¹**	**p²**
Motivation to succeed	16,5±2,37	20,2±2,3	0,012	16±2,05	16,7±1,25	0,091	0,002
Motivation to avoid failure	16,4±4,35	11,5±2,84	0,028	16,8±4,69	15,9±4,65	0,043	0,019
Willingness to risk	3,4±5,87	8,1±1,91	0,027	3,2±6,36	3,7±6,27	0,106	0,045
Volitional qualities	16,9±2,42	22±2,26	0,012	16,5±2,07	16,7±2,98	0,052	0,001

Notes: r¹- - the level of significance by Wilcoxon criterion;

r² - level of significance by Mann-Whitney criterion.

During the comparison of the dynamics of results of experimental and control groups viewing the parameter "willingness to risk" it can be stated that this indicator has improved in both groups. However, the most significant growth and significant differences were observed in the experimental group 138% ($p = 0.027$). Athletes of the control group also demonstrated positive dynamics, but it was not reliable and was 16.6% ($p = 0.106$). Inter-group difference of the growth of this indicator was 122.4% ($p = 0.045$).

At high motivation to achieve Nordic combined skiers are able to form a style of self-regulation, which compensates the influence of personality traits that prevent the achievement of goals.

One of the main psychological parameters of the personality structure, affecting not only result in ski racing, but in ski jumping as well are volitional qualities.

Both in the control and in the experimental groups we observed positive changes during the experiment (Table 2). Unlike the control group, in the experimental group significant changes have occurred during the experiment, the difference from the original data was 30% ($p = 0.012$) and in the control group 1% ($p = 0.052$). Inter-group difference reached 29% ($p = 0.001$) This fact demonstrates the significant impact of the author's psychological training program in the experimental group. At the beginning of the experiment on most indicators of emotional and volitional component under research, namely the "stress factors" among the athletes of the control and experimental groups, there were not found differences (Table 3). Dynamics of psychological parameters in the experimental group had more significant changes in comparison with the control group on a large group of stress factors. Changes of stress factor "previous poor training and low competitive results" during the testing were of positive nature both in the control and the experimental group.

In the control group of athletes under research the negative impact of this parameter on athletic performance decreased by 6.7%, with $p = 0.423$, and in the experimental group, these changes were more significant and were 38.6%, with $p = 0.038$. Inter-group difference in this parameter was 31.9%.

The analysis of stress factor "conflicts with the coach, teammates" showed that only athletes in the experimental group improved microclimate in the team - reducing the influence of this parameter by 54%. In contrast to the control group, where tension both within the team and with the coach were observed. In this group, the increase of this indicator was negative and amounted to 8%. Compared to the original data, at the end of the research the difference in parameter values between the groups was 62% ($p = 0.014$).

Observing the dynamics of parameter "ill-health due to poor physical condition", we can state that a positive and significant reduction of its impact on competitive activity occurred only in the experimental group

37%, with p = 0.007, and in the control group it on the contrary increased 5.2%, p = 0.361. Inter-group differences were statistically significant at the end of the experiment (p = 0.001), the value of the differences reached 42.2%. According to the data on the stress factor "delaying the start or the beginning of competitions", we may speak of positive dynamics and the reduction of impact of this factor on further successful implementation of competitive exercises in both groups under research, but the nature of the decline is different. In the experimental group it is 25%, with p = 0.207, and in the control group its influence has declined by 12%, with p = 0.109. At the same time, the value of changes compared to the original data had significantly statistical character, at the end of the research the difference in values was 13% (p = 0.01). This demonstrates the effectiveness of the author's program of psychological training in the experimental group.

The obtained results on the stress factor "reproach of coach, friends during the performance" added up to the results of the stress factor "conflicts with the coach, teammates," and once again demonstrated the importance of a favorable atmosphere in the sports team. In the experimental group the influence of this parameter was reduced by 38%, with p = 0.068. In the control group the reduction parameters were also positive, but low, only 4%. Inter-group difference was 34% at p = 0.016. Thus, the experimental group showed more substantial and significant positive changes as compared to the control group.

Table 3.The dynamics of the stress factors of 15-17 year-old Nordic combined skiers

Stress factors	Experimental group			Control group			p^2
	Before **M±SD**	After **M±SD**	p^1	Before **M±SD**	After **M±SD**	p^1	
Failure at start	5,8±2,3	3,7±1,95	0,079	5,7±1,16	6±1,25	0,423	0,059
Previous poor training and low competitive results	5,7±2,75	3,5±1,58	0,038	6 ±1,7	5,6±1,9	0,423	0,028
Conflicts with the coach, teammates or in the family	6,7±2,11	3,1±2,28	0,058	4,8±2,15	5,2±1,03	0,423	0,014
Ill-health due to poor physical condition	6,6±1,9	2,9±1,6	0,007	5,9±1,29	6,3±0,67	0,361	0,001
Biased refereeing	7,2±2,1	4,4±3,03	0,044	6,5±1,43	6,2±1,4	0,109	0,241
Delaying the start or the beginning of competitions	4,1±2,28	3,1±0,99	0,207	5±2,16	4,4±2,22	0,109	0,01
A status of a favourite before the competition	4,3±2,0	3,4±2,46	0,123	4,7±1,83	3,7±1,57	0,285	0,385
Reproach of coach, friends during the performance	5,2±2,39	3,2±0,79	0,068	5,7±2,36	5,5±2,22	0,715	0,016
Extreme tension at the start	4,7±2,36	3±0,67	0,888	4,4±1,58	5,5±2,17	0,144	0,002
Increased anxiety, poor sleep before competitions	4,5±2,22	1,7±1,25	0,018	4,7±2,45	4,9±2,18	0,068	0,001
Poor material support of competitions	5,4±3,24	4,8±2,15	0,036	5,6±2,07	5,4±1,58	0,593	0,473
Failure at previous competitions	4,6±2,72	2,5±1,18	0,241	4,5±2,12	4,6±1,9	0,068	0,273
Significant advantage of rivals	5,8±2,74	3,8±0,79	0,024	5,5±2,37	4,6±1,78	0,109	0,650
Unexpected high results of rivals	5,3±2,21	3,5±1,78	0,041	4,6±1,96	4,2±1,81	0,068	0,762
Unknown rival	3,6±2,27	3,9±2,23	0,646	5,1±1,45	3,3±1,49	0,028	0,545
Excessive demands of the coach	4,7±2,11	2,3±1,7	0,024	5,5±1,51	4,6±1,96	0,109	0,016
Long and tiresome travel to the venue of competitions	4,5±1,9	4,5±2,32	0,952	4,4±1,43	3,2±1,14	0,109	0,212
The obsessive idea of successful performance	6,2±1,99	3,3±0,95	0,042	6±0,82	5,4±1,9	0,043	0,014
Acoustic, kinesthetic and spectators interference	4,4±2,27	4,1±2,08	0,918	4,9±1,45	5,1±1,91	0,465	0,162
Previous failure from this rival	5±3,02	3,9±1,85	0,593	4,9±1,85	4,1±1,6	0,068	0,821
Negative reaction of fans	3,5±2,07	3,1±2,13	0,286	3,4±1,65	3±1,05	0,285	0,850

Notes: r^1- - the level of significance by Wilcoxon criterion;

r^2 - level of significance by Mann-Whitney criterion.

Analysis of the results in terms of "extreme tension at the start" showed the importance of start as a major factor in mobilizing one's forces in conditions of extreme psychological stress. In the experimental group, we observe positive impact from reducing this parameter on future successful performance by 36%, with p = 0.888. In the control group it, on the contrary, became more evident and increased to 25%, with p = 0.144. Inter-group difference in average was statistically significant (p = 0.002) and was 59%, confirming the effectiveness of the experimental program of personality structure priority components development.

The dynamics of stress factor "increased anxiety, poor sleep before competitions" was of a different character in both groups. The analysis of the influence of this parameter changes took place only in the experimental group and made a positive impact and a significant decrease by 62.3%, with p = 0.018. In the

control group, on the contrary, this indicator increased by 4%, with p = 0.068. Inter-group difference of indicator growth at the end of the experiment viewing this stress factor was 66.3% (p = 0.001).

The average values of the stress factor "excessive demands of the coach" during the experiment has changed both in the control and in the experimental groups, but the dynamics of changes was different. In the control group, the value of this parameter during the experiment decreased by 16% (p = 0.109). In the experimental group the changes were more reliable and reduced the negative impact on athletic performance by 51% (p = 0.024). Inter-group difference in average values was statistically significant (p = 0.016) and was 35%.

The analysis of the experimental data on the stress factor "the obsessive idea of successful performance" was of positive nature and reduced the negative influence of this parameter in both groups under study. In the experimental group influence of this parameter has decreased by 47% at p = 0.042, and in the control group by 10% at p = 0.043. Inter-group difference in average values was statistically significant (p = 0.014) and was 37%, confirming the effectiveness of the experimental program of personality structure priority components development. The final step in determining the impact of stress factors on successful performance was to compare the groups under study viewing the amount of stress factors. This comparison showed positive dynamics of reducing their negative impact on performance in Nordic Combined. Analysis of the results showed a positive impact on reducing the amount of stress factors in both experimental and control group. Reducing the impact of these indicators in the experimental group was 34.2% at p = 0.007. In the control group it was 6.5% at p = 0.02. Inter-group difference in average values was statistically significant (p = 0.001) and amounted to 27.7%, therefore confirming the effectiveness of the experimental program of personality structure priority components development. In terms of sports results (points) in ski jumping from K-75 m it can be seen that at the beginning of the experiment significant differences between groups were found (Table 4). As a result of the author's program at the end of the experiment the increase in the experimental group compared to the original data has reached 14% (10.31 m), with p = 0.007. In the control group we also experienced a slight improvement in athletic performance 4% (2.97 meters), but the significance level was p = 0.284. Inter-group difference at the end of research between the experimental and control groups was 10%, with p = 0.028, indicating the efficiency of use of the experimental training programs.

Table 4. The dynamics of sports results on the basis of results of the qualifying jump (m)

Indicators	Experimental group			Control group			
	Before M±SD	After M±SD	p^1	Before M±SD	After M±SD	p^1	p^2
Sport result, m	70,84±9,66	81,47±10,89	0,007	69±8,9	71,97±11,99	0,284	0,028

Notes: r^1- - the level of significance by Wilcoxon criterion;

r^2 - level of significance by Mann-Whitney criterion.

Discussion of results.

A significant advantage of the psychological training method is that it provides a unique opportunity to study the complex and emotionally important issues in a safe environment, rather than in the real situations and training and competition in Nordic Combined with its extreme and stress. While psychological training one avoids worries about possible adverse effects that may arise in the case of wrong decision. This, in its turn, allowed the gradual complication of diagnostic psychological and correctional tasks, deepen the level of processing of personal problems, strengthen internal integration, strengthen the motivation for self-development and learn the skills of self-analysis and self-regulation.

Data analysis on the dynamics of parameters display of motivational component of 15-17 year-old Nordic Combined skiers in the experimental group suggests that a decline in motivation to avoid failure increases the motivation to succeed and accordingly increases the readiness to take risks, which in turn contributes to better adaption of athletes to competitive and training conditions (Kazmiruk, A. et al. 2012; Raygorodskiy, D. Ja. 2001). Having analyzed the obtained results, we can conclude that stress factors are of quite significant negative influence on the personality of an athlete in Nordic Combined, in that regard the level of their impact on the achievement of high sport result should be minimized.

In Nordic Combined skiers of the experimental group as compared to the control group athletes we have discovered statistically significant changes (p <0,05) after their participation in psychological training. In particular, the athletes of the experimental group significantly reduced the level of spontaneous and reactive aggression under the influence of such situations as negative reaction of fans, biased refereeing, a significant advantage of rivals. As a result Nordic Combined skiers form their activities in accordance with the adopted goals. Also, they forming strategy of their own behavior directly in the course of competition, with the goal set by themselves, but in accordance with opinion of a coach. Analyzing stress factors concerning communication and in the course of pedagogical observation we have identified and verified the data of G. D. Gorbunov (Gorbunov, G. D. 2006) that approval of adults alleviates stress in interpersonal relationships, especially helping young athletes overcome the isolation in their own inner world, maintains their positive attitude to their own "I".

As a result of psychological training in Nordic Combined skiers of the experimental group significantly increased the rate of self-regulation. They became more confident, decisive and persistent in terms of physical, technical and tactical striving to victory in competitions. This has been confirmed by the research results.

Implementation of the program of personality structure priority components development based on psychological training made it possible to improve technical and tactical schemes in competitive activity of Nordic Combined skiers in the experimental group. In particular, the athletes improved perception of information on strategies to overcome ski slopes in difficult and sometimes adverse conditions, of training and competition. After psychological training has been conducted, a system of constructive relations of athletes with teammates, coaches, rivals and family members has been established.

Conclusions

Testing of the author's program of personality structure priority components development enabled a great increase in the level of motivation to succeed, to reduce the level of motivation to avoid failures and improve emotional stability to the most negative stress factors ($p < 0,05$) in terms of training and competitive activities of Nordic Combined skiers.

Efficiency of the psychological training in the training and competitive activities to achieve a high level of psychological readiness of Nordic Combined skiers has been proven. Experimental verification of the author's program of personality structure priority components development indicates that its implementation improved athletic performance in competitive exercises of Nordic Combined skiers of the experimental group by 10%, with $p = 0.028$ as compared to the athletes of the control group. This fact once more confirms the appropriateness and effectiveness of its use in the training process of athletes.

References

Farmahej O. I., Zinkiv O. V., Zubryc□kyj L. S., Kubin A. P. (2012). Zastosuvannya metodiv ratsional□noho rozyasnennja ta imihotreninhu treneramy u praktytsi pidhotovky sportsmeniv (na prykladi hirs□kolyznykiv ta snoubordystiv). [in Ukrainian], Visnyk Cernihivs□ho nac. ped. un–tu im. T. H. Shevcenka. 98, 201 – 204.

Fomin S. K., Malezyk V. F. (2001). Lyzne dvoborstvo: [navc. proh. dlya dytyacho-yunats□kykh sport. shkil, special. dytyacho-yunats□kykh shkil olimp. rezervu, shkil vyshchoyi sport. majster.]. [in Ukrainian],116.

Gorbunov G. D. (2006). Psikhopedagogika sporta. [in Russian], Moskow, 296.

Kazmiruk A. (2011). Avtorska prohrama-treninh yak efektyvnyy shlyakh formuvannya motyvatsiyi dosyahnennya uspikhu lyzhnykiv-dvobortsiv na etapi spetsializovanoyi bazovoyi pidhotovky.Fizychna kultura, sport ta zdorov'ya natsiyi : zb. nauk. pr. [in Ukrainian], 12, 118 – 123.

Kazmiruk A. Prytulyak-Kazmiruk Yu. (2012). Peculiarities of highly qualified Nordic combined skiers motivational component constituents display. Olympic Sports and Sport for All: proceeding book VI International Scientific Congress. Sofia, 665 – 668.

Klymchuk V.O. (2006). Treninh vnutrishn'oyi motyvatsiyi: rezul'taty aprobatsiyi ta struktura. Praktychna psykholohiya ta sotsial'na robota [in Ukrainian], 10, 52 – 59.

Kolosov A.B. (2008). Psykholohichnyy prostir osobystosti kvalifikovanoho atleta. Aktualni problemy fizychnoyi kultury i sportu [in Ukrainian], 15, 51-56.

Kurylyuk S. I. (2008). Psykholohichni osoblyvosti treninhu dzyudoyistiv na pochatkovomu etapi diyalnosti. Pedahohichna ta vikova psykholohiya, Ivano-Frankivsk, [in Ukrainian], 19.

Kurylyuk S. I., Foytuma, Ya. O. (2010). Efektyvnist' vykorystannya psykholohichnoho treninhu v systemi pidhotovky yunykh dzyudoyistiv. Pedahohika, psykholohiya ta medyko-biolohichni problemy fizychnoho vykhovannya i sportu [in Ukrainian], 3, 39-45.

Malyutina K. L. (2004).Teoriya ta praktyka psykholohichnoho treninhu: navch. posib. [in Ukrainian], 192.

Mente M. (2001). Effektivnoye ispolzovaniye rolevykh igr v treninge. [in Russian], Piter. 208.

Raygorodskiy D. Ya. (2001). Prakticheskaya psikhodiagnostika : metodiki i testy : [ucheb. posobiye]. [in Russian], Samara 672.

Stambulova N. B. (1988).O formirovanii sportivno vazhnykh pikhicheskikh svoystv sportsmenov. Psikhologicheskoye obespecheniye sportivnoy deyatelnosti : mezhvuzov. sb. nauch. tr. [in Russian], 20-29.

Torn K. Makkey D. (2001). Trening. Nastolnaya kniga trenera. [in Russian], Piter. 208.

Voronov I. A. (2005). Psikhotekhnika vostochnykh edinoborstv. [in Russian], Minsk. 432.

Zaytseva T.V. (2002). Teoriya psikhologicheskogo treninga. Psikhologicheskiy trening, kak instrumentalnoye deystviye. [in Russian], SPb.: Rech. M.: Smysl. 80.