EFFECTIVENESS OF 14-15 YEARS OLD TENNIS PLAYERS' COMPETITION FUNCTIONING CONSIDERING CORRECTION OF THEIR PSYCHOLOGICAL FITNESS

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Abstract. *Purpose:* to determination influence of individualized psychological training on effectiveness of 14-15 years old tennis players' competition functioning. *Material:* in the research 24 tennis players of 14-15 years' age participated. Individualized psychological training consisted of 15 sessions of total duration of 1.5 months. *Results:* We substantiated necessity of individualized approach to tennis players' psychological training. Individual psychological profiles for tennis players, which determined content of psychological training and their selection, were worked out. Informative indicators for assessment of 14-15 years old tennis players' competition functioning were determined: 1) percentage of won and lost scores at the account of own actions; 2) integral criteria of tennis players' competition functioning assessment (coefficient of stability and effectiveness; complex indicator of efficiency). *Conclusions:* it is recommended to consider individual potentials and bents of sportsmen in the course of psychological training.
Key words: competition, psychological, individualized, tennis, coefficient of effectiveness.

Introduction

Organization of game in tennis shall be built with consideration of laws, principles and factors of game conduct. These phenomena are constantly acting and influence purposefully on process of competition. Specificity of competition functioning in tennis is manifested in active counter-actions of opponent that requires quick change of realization of player's plan. Sportsmen have to act in conditions of expressed time deficit with quick changes of game situations; if necessary to find adequate response. Effectiveness of game functioning to large extent depends on quick assessment of game situation and choosing of appropriate game techniques. It implies presence of highly developed psychological and psycho-physiological functions [1-4, 8, 14, 16-18].

Important feature of tennis is the fact that sportsmen shall to fulfill a lot of competition actions – game techniques. For achievement of the expected results these techniques shall be fulfilled many times in one game and it dictates presence of reliability and stability of skills. Achievement of sport result is realized by numerous techniques and actions, combined in specific for tennis system [7, 9, 11-13].

Competition functioning of tennis players takes place in situations, which constantly and quickly change. In such cases sportsmen use great number of different actions oriented on achievement of victory. Owing to great amount of competitions sportsmen shall quickly response to every situation by adequate actions. Even at meeting with well known opponent tennis player never faces exact replica of time, space and other characteristics, Functional state of tennis player significantly changes even within the frames of one competition. It is connected with indefinite time of match duration [5-6, 19-21].

Many of components of tennis players' competition functioning are very often weakly connected with each other. Only after determination of perfection level of every of component it is possible to objectively assess strong and weak sides in structure of competition functioning of a sportsman as well as to work out competition functioning model and individual training program for him.

Multi-sided knowledge about structure of competition functioning, presence of proper functional potentials and sportsman's technical tactic fitness are preconditions for achievement of sport results, as well as level of special motor skills and psychological fitness of players [4, 8].

In specialists' works significant influence of junior tennis players' psychological features on success of their sport functioning. The researches, conducted by T.S. Ivanova, showed that level of attention and thinking of 15-16 years old tennis players directly influence on effectiveness of their game actions during tennis match [6]. Similar data were received by K.Kh. Nguien as a result of comparison of junior 13-16 years old tennis players with their psychological fitness [9].

However, in process of tennis players' psychological training no one considers two important principles: 1) consideration of sportsman's individual features; It facilitates more efficient opening of their abilities, effective mastering of technical-tactic skills and rising of sportsmanship; 2) application of systemic approach in the course of researching of players' psychological potentials and their further development [11-13, 21]. In this connection the researched problem is topical and practically significant for tennis.

Purpose, tasks of the work, material and methods

The purpose of the work: to determination influence of individualized psychological training on effectiveness of 14-15 years old tennis players' competition functioning.

In the research 24 sportsmen – disciples of children-junior sport schools in Kiev and Lvov- participated. Sportsmen were divided into two equivalent groups: control and experimental (12 players in every group). The research

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lasted for 1.5 month. Experimental group's tennis players endured 15 (separate) psychological trainings of 30 – 50 minutes' duration. Control group's tennis players were psychologically trained in traditional form (mainly at trainings and before competitions). For every player of experimental group individual psychological profiles were made up, which determined choice of means and methods of training. The content of the offered trainings completely depended on individual features of every sportsman. Prevalence or "weakness" of psychological fitness's certain sides influenced on choice of trainings' means and methods. For every player we worked out individual programs of psychological training, which included fifteen separate sessions. We formed main types of psychological trainings, which were orientated on specialization: 1) – orientation on motivation-will sphere; 2) – training of prevailing development of memory functions (short-term and long-term); 3) – trainings, oriented on prevailing of sportsmen's cognitive resources. Training of different parameters of attention and mental workability; 4) – combination of motivation-will sphere and training of attention; 5) – trainings, oriented on increase of tennis players' self estimation; 6) – trainings of analytical-projecting character; 7) – increase of stress-resistance and optimization of players' anxiety.

Results of the research

For determination of the offered individualized approach's influence we analyzed players' performance in Cup of Ukraine (Petrovske village). Performances' results were compared with competition data, achieved in previous competitions (championship of Ukraine (Bucha). Sportsmen of experimental group demonstrated better competition results, in comparison with control group's players.

For assessment of competition functioning we used the following criteria:

1) percentage of won and lost scores at the account of own active actions;

2) integral criteria (coefficient of effectiveness, coefficient of stability and complex indicators of efficiency).

The mentioned above criteria do not exhaust all combination of data, which can be used for such assessment. In comparison with other data they are rather informative. The applied criteria create holistic picture about successfulness of players' main competition actions.

After specialized psychological training, experimental group's sportsmen had confidently better percentage of won scores at the account of own active actions and less percentage of lost scores (see fig.1).

It was found that percentage of won scores at the account of own actions of experimental group's tennis players at the beginning of experiment was – 25.67±3.65%. After experiment this indicator became confidently higher (32.40±4.7%). Quantity of scores, lost at the account of own actions, confidently reduced ($p<0.05$). The level of this indicator significantly exceeds model characteristics for junior players (14-15years old). It witnesses about more rational and balanced game at match.

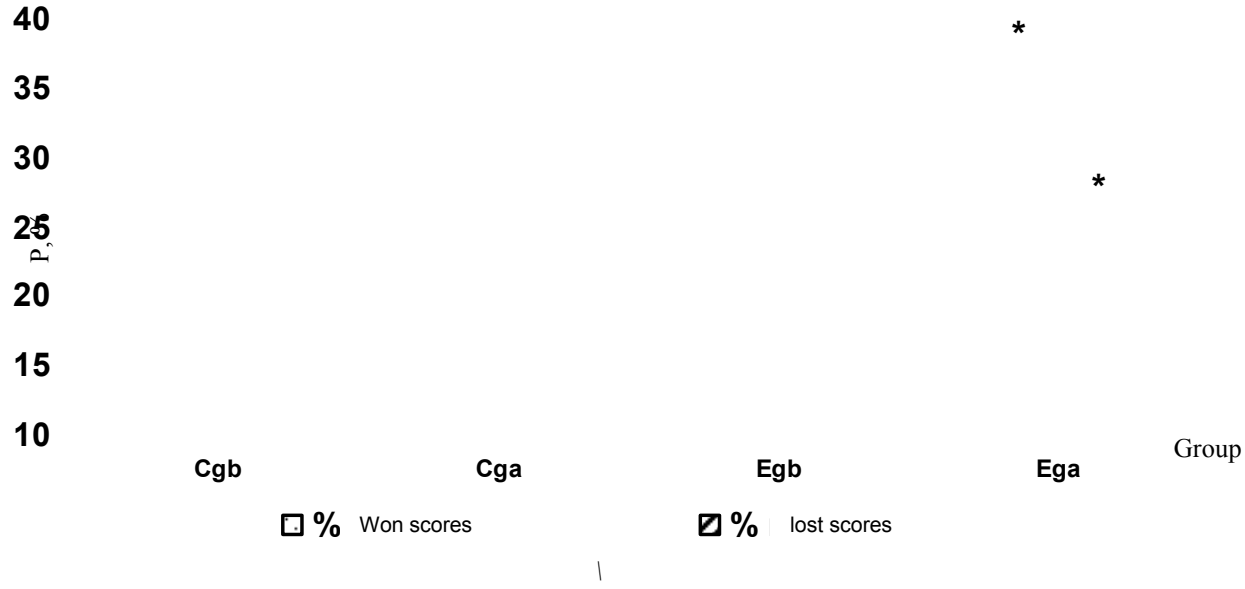

Fig.1. Percentage of won and lost scores by 14-15 years' old tennis players at the account of own active actions before and after experiment:

P –percentage of scores, %; Cgb – control group before experiment; Cga – control group after experiment; Egb – experimental group before experiment; Ega – experimental group after experiment* - $p<0.05$

At the beginning of experiment percentage of lost scores was 28.91±5.36% and after its finishing – 19.70±5.50% (for comparison: for adult sportsmen 15% of lost scores at the account of own actions is considered to be a model level). Besides, increase of manifestation of integral game effectiveness criteria was observed (see fig.2).

Tennis players of experimental group demonstrated higher coefficients of stability (CS) and effectiveness (CE) as well as complex indicator of efficiency (CIE) at receiving services and serves with rebound (see fig.3).

However, these distinctions were confident only for coefficients of stability and complex indicator of efficiency ($p<0.05$).

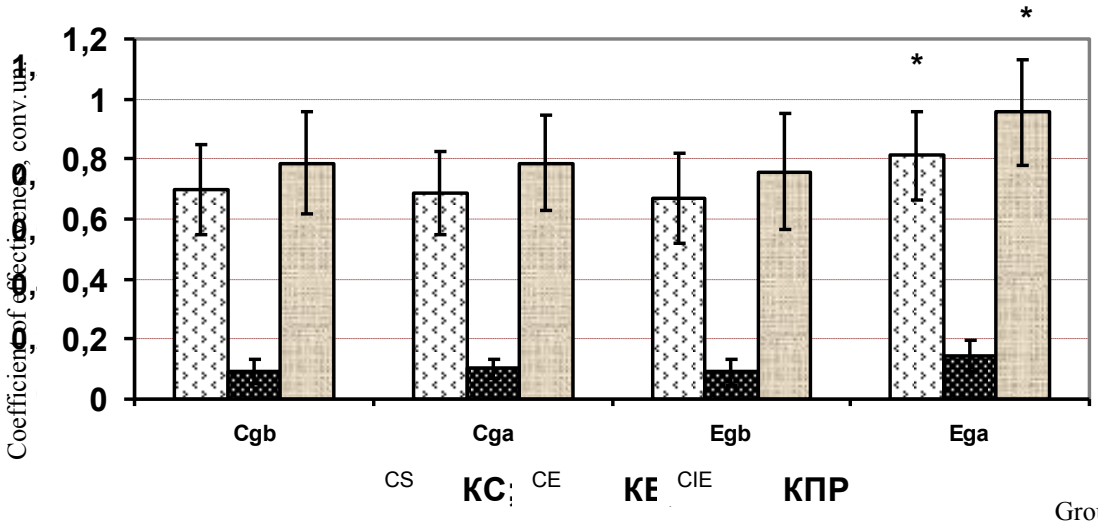

Fig.2. Integral indicators of receiving of services by 14-15 years' old tennis players before and after experiment: Cgb – control group before experiment; Cga – control group after experiment; Egb – experimental group before experiment; Ega – experimental group after experiment* - $p<0.05$

Coefficient of effectiveness at receiving of services and in with rebound also improved (0.05±0.02 and 0.09±0.04 before experiment; 0.10±0.04 and 0.14±0.05 after experiment). However these positive changes were not confident. The reason to it was high level of coefficient of data variation. It reflected significant individual distinctions in manifestation of this integral indicator.

Sportsmen of control group did not confidently improve any of the mentioned indicators, analyzed by us. Increase of competition effectiveness is extremely important indicator. It witnesses correctness of the chosen direction of work and importance of individualized psychological training of sportsmen.

Discussion

In this work we confirmed the data of specialists (T.S. Ivanova, 1998; K.Kh. Nguien, 2008;) about influence of psychological features of junior 14-15 years old tennis players on successfulness of their training and competition functioning. We also supplemented the data of Ye.V. Vasina, 2008; M.V. Ibrayimova, 2011; T.I. Knyazieva, 2010), about difficulty of competition functioning in tennis and necessity to use reliable criteria for its assessment.

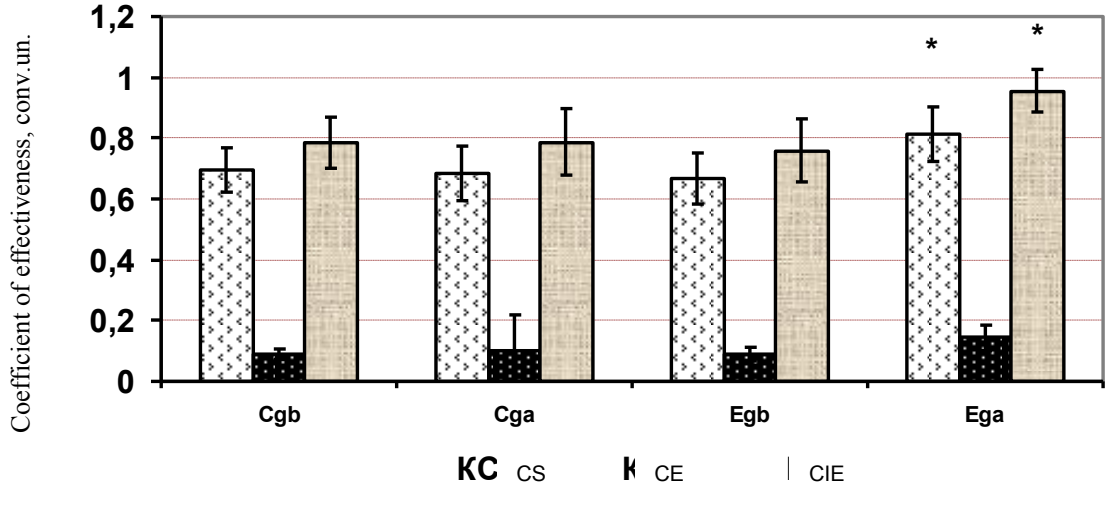

Fig.3. Integral indicators of services with rebound fulfilled by 14-15 years' old tennis players before and after experiment:

Cgb – control group before experiment; Cga – control group after experiment; Egb – experimental group before experiment; Ega – experimental group after experiment* - $p<0.05$

In process of assessment of junior tennis players it has been offered to use integral indicators of successfulness and model values, which reflect percentage of won and lost scores at the account of own active actions. In our work, for the first time it is offered to use individualized psychological training and its influence on competition functioning of junior 14-15 years old tennis players.

It has been found that after course of specialized sessions sportsmen had confidently higher indicators of effectiveness of competition functioning. The received data permit to affirm that it is necessary to continue researches of sportsmen's individualized psychological training influence at different stages of many years perfection.

Conclusions:

1) Application of psychological training means is a topical direction for increase of competition functioning's effectiveness. Individualization of psychological training permits to consider specific features of every player when choosing means and methods of work as well as to choose required style for communication with a sportsman and plan his (her) future perfection.
2) Implementation of individualized approach and psychological training programs in training process influenced positively on effectiveness of tennis players' competition functioning. Tennis players of experimental group demonstrated higher level of coefficients of stability (CS), coefficients of effectiveness (CE) and complex indicator of efficiency (CIE) in receiving of serves and in serves with rebound.
3) Percentage of won scores at the account of own active actions significantly improved in experimental group (from 25.67±3.65% to 32.40±4.7; $p<0.05$). Also we observed confident reduction of percentage of scores, lost at the account of own active actions (at the beginning of experiment – 28.91±5.36%, after its finishing – 19.70±5.50%).

The prospects of further researches are connected with implementation of individualized psychological programs in training of elite tennis players.

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Conflict of interests

The author declares that there is no conflict of interests.

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