Study about the Manifestation of Some Cognitive Abilities in Karate and Taekwondo

Vasilica Grigore\textsuperscript{a}, Mihaela Paunescu\textsuperscript{a*}, Catalin Paunescu\textsuperscript{b}, Radu Predoiu\textsuperscript{a}

\textsuperscript{a} National University of Physical Education and Sport, 140 Constantin Noica St., 060057, Bucharest, Romania
\textsuperscript{b} Carol Davila’ University of Medicine and Pharmacy, 37 Dionisie Lupu St., Bucharest, 020022, Romania

Abstract

This study wants to investigate the existing correlations between spatial orientation, cognitive inhibition capacity and creativity - expressed through fluency (wealth of ideas produced in a certain time frame) and mental flexibility (as opposed to the rigidity of thinking) in two combat sports, karate and taekwondo (TKD). To solve the research issues, we used: observation, conversation and tests - Spatial Orientation test, Cognitive Inhibition test (from the computerized platform Cognitrom Assessment System, developed by Cognitrom), Imagination and Creativity test. The result analysis indicates a positively significant correlation between the spatial orientation ability, the cognitive inhibition capacity and the results obtained by the athletes for two major components of creativity - fluency and mental flexibility.

Keywords: cognitive skills, spatial orientation, cognitive inhibition, imagination, karate, taekwondo.

\textsuperscript{*}E-mail address: misu_paunescu@yahoo.com
Predicting Competitive Swimming Performance

Roczniok Robert\textsuperscript{a,*}, Maszczyk Adam\textsuperscript{a}, Pietraszewski Przemysław\textsuperscript{a}, Arkadiusz Stanula\textsuperscript{a}, Artur Gołaś\textsuperscript{a}, Robert Wilk\textsuperscript{b}

\textsuperscript{a}Department of Statistics and Methodology, The Jerzy Kukuczka Academy of Physical Education, Katowice, Poland
\textsuperscript{b}Department of Water Sports, The Jerzy Kukuczka Academy of Physical Education, Katowice, Poland

Abstract

A group of 40 swimmers, aged 23±5 years took part in the study. The main goal was to use Kohonen maps to optimize recruitment for sport swimming. Statistical analyses were carried out on the basis of results of the independent variables (physiological and physical profiles). In predicting the value of variables measured with the so called strong scale regression models, numerous variables were used. The construction of such models required strict determination of the endogenous variable (Y- results for swim distances of 200 m crawl). Also important is the optimal choice of explanatory variables. Optimal selection of variables for Kohonen’s feature maps (data mining analysis) was carried out using stepwise regression. The obtained model has the form of a topological map. In taxonomic analysis certain areas can be separated. Topological map constructed in this way can be used in the assessment of candidates for sports training.

Keywords: Kohonen feature map; swimming performance; sports selection; regression analysis; prediction of sports results

* Corresponding author: Roczniok Robert
Tel.: +48533487601
E-mail address: r.roczniok@awf.katowice.pl
Determining The Sport Level of the Players in Ice Hockey Using Multivariate Analysis

Rocznioł Robert*, Zając Adam, Maszczyk Adam, Gołaś Artur, Pietraszewski Przemysław, Łukasz Rutkowski, Wiśniewski Piotr, Kozłowski Krzysztof

*Department of Statistics and Methodology, The Jerzy Kukuczka Academy of Physical Education, Katowice, Poland

Abstract

Ice hockey is a physically demanding contact sport involving repeated bouts of high energy output. Success at the elite level requires players to develop fitness including anaerobic sprint ability, strength, power and endurance. The ability to successfully identify elite versus non elite players could influence a team’s success. Therefore, effective classification of players based on physical characteristics and performance parameters requires a critical analysis of the qualities deemed important for a particular sport. The surrounding reality is by nature complex and multidimensional and situations where one variable explains a given phenomenon is rather rare. The main research problem of this study was to present a mathematical model describing best players represented by the Players Development Index. Studies were carried out on a group of 25 Polish top level ice hockey players. Data collection was conducted in December 2013 and included two days of testing for each athlete. Independent variables related to physiological and physical profiles and on-ice performance. During the study the structure of the Players Development Index was analyzed, also through discriminate analysis and 3 classification functions calculated with its help. Their role consisted in the detailed selection of players for groups of a different level of development.

Keywords: players development index; sports selection; prediction of sports results

* Corresponding author: Rocznioł Robert Tel.: +48533487601
E-mail address: r.roczniol@awf.katowice.pl
Comparative Study of Somatic and Motor Characteristics of the Athletes Who Have National and World Records in the Long Jump

Associate Professor PhD Gheorghe Daniel *

F.E.F.S. Spiru Haret University, Bucharest, Berceni street no. 24

Abstract

An overview of global and national athletes at the middle of the Olympic period, is welcome, as it helps in detaching certain key elements in the selection and preparation of our athletes. In evaluating athletes we must always take into account two fundamental components of human performance in general: the biological and psychological. In this study we envisaged test long jump that is performance level, age, height and weight of athletes. There was a longitudinal study on these indicators, aiming especially performance rate of progress. This paper presents the development of national and world records and some of the athletes concerned somatic data (where they could be found). On this basis it could extract stable elements and exceptions in performance and somatic data. Material interest mainly specialists in the field, and future graduates with deepening athletics. In this study we left the following hypotheses to be tested:

- The rate of progress overall performance did not differ by more than 1 m. both men and women and between national and world records;
- Annual performance progress rate does not differ by more than 10 cm. seconds both men and women and between national and world records;
- Mode Romanian and foreign athletes age does not differ by more than 1 year;
- Mode Romanian and foreign athletes height do not differ by more than 5 cm;
- Mode Romanian and foreign athletes weight do not differ by more than 5 kg.

Keywords: athletes, performance, long jump, statistics

* Corresponding author. Tel.: 40-0722-723-259; E-mail address: daniel_g19071963@yahoo.com
Operational model for the specific strength development with medicine balls in javelin throwers

Corina Ivan\textsuperscript{a*}, Margareta Anton\textsuperscript{b}

\textsuperscript{a}National University of Physical Education and Sports, 140 Constantin Noica St., 060057, Bucharest, Romania
\textsuperscript{b}Physical Education and Sport Faculty, Ecological University, Vasile Milea St., Bucharest, Romania

Abstract

This paper is based on the obtained results after the training modeling (as a cybernetic method of research), by considering the significant relation between means and performance, on the one hand, and between means and the throwing technique, on the other hand. Performance stagnation/regression in javelin throwing is also partly determined by some defective (or incomplete) methods for the development of motor qualities specific to this event. Our study presents an operational model for the specific strength development with medicine balls in javelin throwers. The model is characterized by the fact that intensity registers a progressive increase in each stage. This is achieved by increasing the ball weight, while the number of repetitions per series remains constant. We think that the application of the described operational model, consisting of the medicine ball throwing, in the athletes’ specific preparation will increase their explosive strength and will concomitantly improve their throwing technique. To conclude, the proposed model implementation in the athletes’ training schedules will help them achieve significant results in the javelin throwing event.

Key-words: javelin throwing, strength, operational model, repetitions, medicine ball.

\* Corresponding author. Tel.: +0-072-436-7926
E-mail address: corinajavelin@yahoo.com
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Anxiety Manifestations in Relation to the Preparation Periods in Karate DO

Lambu Ioana Sorina*

*National University of Physical Education and Sports, 140 Constantin Noica Street, 060057, Bucharest, Romania
* ioana_lambu@yahoo.com

Abstract

The competitive characteristics in karate do represent important proximal factors for an increase in the anxiety level. Thus, the athlete’s attentional resources are possible to be no longer exclusively focused on finding the solution to win the victory, but on the negativist thinking.

We start from the premise that the anxiety manifestation level intervenes during the competitive fighting.

Our approach represents a qualitative research based on the case study method. In this research, we used the Endler Multidimensional Anxiety Scales that assess anxiety as a state (EMAS-S), as a trait (EMAS-T) and as a perception (EMAS-P). The analysis of the obtained results showed us an improvement of the athletes’ performances, which, in the first testing, were less good, but in the second one, they placed the athletes within low anxiety classes; we also noticed a decrease in the participating athletes’ anxiety level, as the main competition was getting closer.

Keywords: karate do; anxiety; performance
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**Specific Quantitative and Qualitative components in tennis**

Prof. drd. Buzarmescu Mihaela, Prof. Dr. Buzarnescu Mihai, Prof. drd. Petre Andrei Tiberius

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**Abstract**

In the science of sports training, the two categories and philosophical dictionary, have two corresponding concepts: volume and intensity. Volume effort of playing tennis is determined by the total time of play. Intensity exercise. Qualitative side of effort is given by intensity, which is the result of reporting the work done per unit time. The effort of playing tennis is a composite effort, meaning an aerobic-anaerobic exercise interspersed with phases, which produce an apparent steady state (ergostage). According to experts, from a biological perspective, the intensity of effort in the game of tennis is characterized by alternating the phase of the Sub-maximal to maximal efforts. The investigations made that, on average, for 1 minute of the game is effectively 3-5min rest, while partial recovery sufficient oxygen debt. Our records show that one lesson of 100-200 shots in training runs different speed regimes and placement in the space game.

Key words: quantity, quality, volume, intensity, effort, contests, techniques.
The Influence of Football Game in the Socialization of Students from High Schools with Sports Major Profile

Doru Stoica*, Dumitru Barbu*

*University of Craiova, Faculty of Physical Education and Sport, Brestei 156, 200585, Craiova, Romania

Abstract

Education must have a pronounced prospective character, through its prognosis and its programs anticipating the personality type demanded by the society of the future. The aim of this paper is the improvement of the educational process during sportif training at high-school level through the influence of football game in students’ socialization. As well as this, the paper aims to establish in what way practising this sport differentiates students in a high-school with a special program from those attending a usual high school. In order to assess the level of sociability, we used the following research methods: observation, conversation and the questionnaire method. The questionnaire, designed by Gh. Arădăvoaice and. Palmer (1998), included 24 questions, modified and adapted to research subjects. The experiment was carried out over a period of four years. The subjects in this research were 22 students in either group (the experimental group and the control one). We should mention that during the experiment, students from the High School with sports program conducted a number of 8 training sessions a week and about 30-35 official and unofficial games per year.

The results show that the experiment classes recorded higher values of all sociability indices than the control classes. Thus, we have concluded that during the four years of high school education, the degree of sociability constantly increased in both groups, but this was significantly higher in the experimental group, due to strengthening the relationships among students in competitions.

Keywords: socialization, football, performance sport.

* Corresponding author. Tel.: +4-073-750-4480; fax: +4-025-142-743.
E-mail address: doru_stoica_2005@yahoo.com
Efficient Ways of Improving the Combination Attack in the Junior B Footballers (16-17-year-old)

Dumitru Barbu*, Doru Stoica

*University of Craiova, Faculty of Physical Education and Sport, Brestei 156, 200585, Craiova, Romania

Abstract

The aim of this paper is to examine certain standard technical and tactical structures’ role and their involvement in the process of training the combination attack, in order to increase efficiency during the football game.

The methods used in the research were global practice in various conditions and competitive circumstances and socio-psychological training, the latter one consisting of methods and means in the area of psychology and sociology, all oriented towards changing the football players’ mentality, behaviour and attitude related to playing football and training as well as to their daily life.

The current research presents the results from recording the matches in Juniors B National Championship, with focus on some procedures, considered as highly important in performing tactical actions by the players as well as in their collaboration. These technical and tactical procedures are as it follows: short passes, long passes, one-two, centers, shots to goal.

The experimental group consisted of 16 junior B footballers (born in 1996) from Gica Popescu Football School. The result of introducing the exercises based on combinations in the juniors’ training was homogenization of the team, within which each player focuses, thinks and acts as part of a whole. The players perfected the skill of orientation in the pitch when they got ball possession, on the basis of coherent movements with and without the ball in the game area. The exercises used during the training sessions made a mark on the combination game of the team based on combinations performed at optimal speed, according to teammates and opponents.

The recordings of the games in the former and the latter halves of the National Championship showed significant increase in all the technical and tactical elements under investigation, thus confirming the research hypothesis.

Keywords: football, combination attacking, juniors, training, performance.
Abstract

This paper is meant to analyze the kinematic and dynamics characteristics of Yurchenko vault in women’s artistic gymnastics. This scientific approach led to the conduct of an experimental study, using the following methods of research: method of bibliographic study; video computerized method, by means of the programs: "Pinnacle Studio", "Kinovea" and "Physics ToolKit"; postural method of movement orientation; statistical method, with the help of "KyPlot" program. The use of modern research methods for the video computerized analysis of the key elements of Yurchenko vault sports technique in women’s artistic gymnastics is the basis for the measurement, analysis and assessment of the kinematic structure in other events too in artistic gymnastics and in other sports branches with routines of complex coordination.

Keywords: Dynamics, key elements, kinematics, performance, vaults.
Trait anxiety and coping strategies in aerobic gymnastics and handball

Grigore Vasilica, Mitrache Georgeta, Păunescu Mihaela, Predoiu Radu*, Radu Alexandra

*U.N.E.F.S. Bucharest, Constantin Noica, No. 140, 060057, Romania

Abstract

The aim of this study was to investigate the existing correlations between the trait anxiety and the coping modalities. The Endler Multidimensional Anxiety Scales (EMAS) belonging to the Cognitrom Assessment System, designed by Cognitrom, and the COPE Survey (Coping modalities) allow greater precision in assessing anxiety and coping strategies across sport situations. The subjects who took part in this study were 16 female athletes (8 practising Aerobic Gymnastics and 8 practising Handball). Using the Spearman correlation there have been important relations highlighted between the trait anxiety in socially-evaluative, physically dangerous, new or ambiguous situations and the results obtained by the athletes for planning, eliminating competing activities and mental passivity coping strategies.

Keywords: trait anxiety, coping strategy, aerobic gymnastics, handball.

* Radu Predoiu, Tel.: +4-073-518-6896
E-mail address: radu_predoiu@yahoo.com
ABSTRACT
Repetitive and overuse movements, and individual anatomical variations or trauma of the shoulder may cause different rotator cuff injuries. The objectives of this prospective study were to establish the incidence of injuries in athletes, to evaluate the relationship between the incidence of the shoulder joint hyperfunctional disease and age, sports branches and longevity sports field and to develop and implement prophylaxis protocols for training.

Material and method: The study included 116 athletes (basketball, handball and volleyball players), aged between 13-42 years old, with 4 up to 20 years of sports experience, followed-up for three years. It was observed that the injuries of shoulder were significantly higher in men compared to women volleyball players (p = 0.015, α = 0.05). The injuries of shoulder were significantly higher in men compared to women handball players (p = 0.015, α = 0.05). The injuries of shoulder were significantly increased in handball compared to basketball players (p = 0.004, α = 0.01). The injuries of shoulder were significantly higher in volleyball players compared to basketball players (p = 0.003, α = 0.01).

Conclusions: The injuries of shoulder were significantly increased in handball and volleyball men players comparative with basketball players. Moreover, the athletes have different perceptions of kinetic recovery after trauma.

Keywords: sport performance, overload, shoulder, traumatic risk
Implementation of a Program Based on Specific Means for the Execution Speed Development in Karate-Do

Petre Răzvan-Liviu, Murăreţu Daniel Constantin, Teodoru Marian Daniel

National University of Physical Education and Sports, 140 Constantin Noica Street, 060057, Bucharest, Romania
* Corresponding address: dan_muraretu@yahoo.com

Abstract

In order to achieve the objectives of our study, we constructed a specific training program for the execution speed development in karate-do. The training program was applied all over the experimental research period. The specific training means were distributed on preparation cycles, in a number of 16 training sessions per month (4 per week); they were administered in the first 5 training cycles and were repeated in the following 5 cycles, by modifying the execution intensity (technical executions per time unit). We mention that the general preparation schedule for the subjects of our research was not modified, but we used the means that would be presented, in a personal manner, under the table form, by replacing thus the old training means within the competitive kumite sequence included in the training sessions. The 10 subjects of our research positively responded to the training program implemented by us.

Keywords: speed, karate-do, technical executions.
Performance analysis of 60 M Hurdles at Indoor National championships for Seniors in 2013

Paraschita Florina

Faculty of Physical Education and Sport, Ecological University of Bucharest, Romania

* Corresponding address: Tel.: +40723 065 466
E-mail address: luludenia@yahoo.com

Abstract

In the sprint and hurdles events, working capacity of athletes is subject to acceleration of the launch from the start, developing a maximum power achieved while maintaining speed, fatigue occurs in the running.

Performance, results depend to a very large extent the technical execution and rhythm units. A unit rate is considered as a section of running ranges in time and space that occurs between two successive landings. Rhythm unit objectives are: a time as short as possible, standardization times the fastest average time of all nine spaces running.

Purpose. This study aims to analyze and interpret the evolution of athletes from 60 m hurdles at the Indoor National Championship and Crystal Cup Senior in 2013.

Keywords: hurdles; result; times; athletes
Abstract

The present research aimed at studying the attention capacity in top performance weightlifting athletes. In this sense, we selected five top performance weightlifters (boys) aged between 26 and 34 years, members of “Steaua” Sports Club of Bucharest. Our research started from the premise that the implementation of some methods for improving the attention concentration on each of the elements composing the technology of weightlifting styles would increase the athletes’ performances. Thus, the purpose of our study was to improve the methods and the technology specific to the procedures used in weightlifting, by increasing the concentration capacity. The tests administered to the athletes in order to assess their attention capacity, respectively their distributed (divided) attention and their focused (concentrated) attention, were the Prague Test and the Toulouse-Pieron Test. We should also add that, in this study, we present the results obtained by the above-mentioned subjects in their final assessment.

Keywords: assessment; attention; concentration; weightlifting athletes.
Kinematic Biomechanical Analysis of "Handspring Forward with 1½ Tucked Salto Forward" Vault

Stroescu Silvia Alexandra *

UNEFS, Str. Constantin Noica, Nr. 140, Sector 6,C.P. 060057 București,România

Abstract

Acrobatics is the oldest gymnastic activity and vault with its structure is part of it. Almost all vaults include run, take off, flight to apparatus, take off from apparatus, flight and landing. In the case of vaults with salto, body position during flight phase can be tucked, piked, stretched or arched. More difficult vaults require higher velocity and therefore higher momentum. The feature of vault that I study is the 1½ tucked salto forward met in the second phase of flight. This extra burden question arises from execution with maximal parameters of velocity, action on springboard and time of support being the factors that impede women gymnasts executions.

The biomechanical reason is that the gymnast can perform the elements in easier conditions. Thorough analysis of the biomechanical data allows more detailed conclusions outline, such as those related to the kinematic and the dynamic errors, which leads to and causes other errors. Through these examples, I want to highlight the usefulness of kinematic biomechanical analysis, which covers both analytic interpretation for finding the errors and analytical mode to direct the gymnast, what to do to do it right.

Keywords: artistic gymnastics, biomechanical analysis, vault,
Cerebral dominance in elite Romanian female artistic gymnastics

Popescu Gabriel\textsuperscript{a}, Predoiu Radu\textsuperscript{a*}, Stroescu Silvia\textsuperscript{a}, Radu Alexandra\textsuperscript{a}

\textsuperscript{a}U.N.E.F.S. Bucharest, Constantin Noica, No. 140, 060057, Romania

Abstract

The purpose of this study was to investigate the “whole brain” model in elite Romanian female artistic gymnastics. The subjects who took part in this study were 8 female athletes former members of the Olympic gymnastics team and 20 female participants who do not conduct systematic physical activities (students within the National University of Physical Education and Sport Bucharest). Using the Mann-Whitney test there have been important differences highlighted between the samples of subjects, for the cerebral preferences – the lower left quadrant and the left side of the brain (left operating mode).

Keywords: cerebral dominance, lower left quadrant, left side of the brain, artistic gymnastics.

\* Radu Predoiu, Tel.: +4-073-518-6896
E-mail address: radu_predoiu@yahoo.com
Abstract

The current requirements of senior football game ask the players to have an optimum effort capacity, so that they can solve the technical and tactical actions. In this context, we are referring to the speed developed during the players’ actions in attack and defense, to the achievement of efficient running in both space and time, to the number of kilometers covered by them, to the increased adversity and the high stakes in official games. This research aims to highlight the functional model of the UNEFS students, practitioners of football game, within the current sports performance, by considering the profession that will be chosen by the graduates from the Faculty of Physical Education and Sports – physical education teacher, teacher-trainer or football coach. To this purpose, we used measurements and functional tests to determine the investigated subjects’ heart rate and vital capacity, with a special focus on their aerobic and anaerobic capacities. The collected data will help us establish the functional level of the UNEFS students, this aspect representing a landmark for the students integrated in the Romanian higher education, who practice the football game.

Keywords: coach; football; functional model; physical education; students; training.
Abstract

The purpose of this study was to assess whether the proposed methods of monitoring the fatigue of the players (questionnaire of fatigue, RPE-s, coaching observations, individual player performance profile) could be a useful tool for monitoring changes in the process training among rugby sevens players during different periods. To assess the effectiveness of the training process, strength and conditioning coaches are required to monitor training load and training fatigue. Methods: The session rating of perceived exertion (RPE) method for quantifying training load and strain has become a popular tool for monitoring training for different periods of time. Same with the individual player performance profile. Those 2 methods are simple and practical. Another tool to monitor changes in training and to detect early signs of tiredness and overtraining, specialists use “short questionnaire of fatigue” which is made after the large questionnaire of the French Society for Sports Medicine. It’s a questionnaire which consists of 8 items focused on the perception of training, sleep, concentration, anxiety and general stress. Results: Training load and fatigue increased in the first 6 weeks of training, decreased during the tapering period, and remained constant for the first 2 weeks from the second phase, escalating in the next 2 weeks. Subjects: 12 professional 7’s rugby players completed a 10 week training program composed of 2 phases of 6 weeks and 4 weeks. Conclusions: The results show that the short questionnaire of fatigue is a practical tool for monitoring the training process and the training loads for a rugby 7’s team. Using also the RPS method, this could provide additional information on the players, helping coaches and strength and conditioning coaches to prevent overtraining and injuries.

Key words: rugby sevens, performance, training, fatigue, monitoring
The role of the junior multisport competitions in elite athlete development for participating in the Olympic Games

Florin Misca*

Abstract

The paper will present the specificity of the Olympic multisport competitions and the importance of the experience gained in such sports event before participating in the Olympic Games.

I intend to present the role of the European Youth Olympic Festival (EYOF) in the process of athlete development for participating in the Olympics. Since 1991 until now, EYOF was the only Olympic multisport competition dedicated exclusively to the European countries. The editions held so far (12 summer editions, 11 winter editions) offer sufficient data for an analysis. The latest Festivals’ editions contained 8 sports for the winter edition (Brașov) and 9 sports for the summer edition (Utrecht), from the entire Olympic sports programme (26 at the summer edition London 2012 and 15 at the winter edition Sochi 2014). In this paper I’ll try to answer the question if the participation in EYOF represents a contributing factor to the Olympic performances.

The paper will bring arguments to justify the EYOF motto: "where the future sport stars are born".

Keywords: multisport; Olympics; athlete development

* Corresponding author. Tel.: +40-740-121-732; 
E-mail address: florin.misca@gmail.com
Identification of the Execution Time in the Snatch Weightlifting Event

Murărețu Daniel Constantin, Petre Răzvan-Liviu, Teodoru Marian Daniel

*National University of Physical Education and Sports, 140 Constantin Noica Street, 060057, Bucharest, Romania
* Corresponding address: dan_muraretu@yahoo.com

Abstract

The purpose of our research consists of checking the possibilities to use the computer-based imagery technique. Recording and measurement were performed by means of the AviSynth software program. And the equipment necessary to the video recording consisted of: a JVS digital camera, a tripod, an electronic computer, a laptop, a video monitor and video tapes. In this sense, we present in our research the results obtained by the weightlifting athletes (49) from diverse sports clubs. Practically, all these athletes participated in different national competitions, during which we measured their execution times in the snatch event. Thus, all these weightlifters were filmed and recorded while performing the barbell lift. The execution time was recorded since the moment when the barbell left the floor (platform) until the moment when the barbell was fixed. We mention that the present research is in progress and that in this stage of the study we have only recorded the technical executions of the three statutory attempts.

Keywords: identification, execution time, weightlifters.
Abstract

The paper is intended to highlight the influence of specific means on the dynamics of effort parameters during competitive period in performance weightlifting. This approach has led to the organization of a study in the Romanian Weightlifting Team, with a number of 7 athletes (2 girls and 5 boys), conducted throughout a period of 4 training micro-cycles (from June 17 to July 12, 2013), having the performance objective the participation in the Summer Universiade held in Kazan City, Russia. An optimum relationship provided between the specific means for technique and strength training in conformity with the dynamics of effort parameters during competitive period influenced the level of training, which was confirmed by the results achieved in competition.

Keywords: Performance, planning, strength, technique, weightlifting.
Influence of Dance Sport on the Development of Kinesthetic Sensitivity in Junior I Dancers (12-13 Years Old)

Grigore Maria Florica\textsuperscript{a}, Grigore Virgil\textsuperscript{b}, Mihaiu Costinel\textsuperscript{c}

\textsuperscript{a}Ecological University of Bucharest, Bd. Vasile Milea nr.1G, 061342, Romania
\textsuperscript{b}National Children's Palace of Bucharest, Bl. Tineretului 8-10, 040353, Romania
\textsuperscript{c}Department of Physical Education and Sport, University of Bucharest, Bl. Regina Elisabeta 4-12, 030018, Romania

* Corresponding address: tgrigore13@yahoo.com

Abstract

The authors of this paper tried to highlight the influence of dance sport on the development of the kinesthetic sensitivity in junior I dancers (12-13 years old). This scientific approach has led to a pedagogical experiment using the following research methods: bibliographic study, pedagogical observation, experiment, test, methods of statistical-mathematical processing and graphical representation of data. The superior results achieved by the experimental group at the end of the scientific intervention in terms of kinesthetic sensitivity are due to the influence of the exercises belonging to dance sport in which one partner dances without visual control which is indicative of a very high sense of movement.

Keywords: Dance sport, psycho-motor abilities, testing, training;
Abstract

Handball game is characterized by heterogeneity and differences regarding morphological composition between players, according to the playing position. The relationship between anthropometric characteristics and demands of athletic performance may be more acute in female than in male players in view of the development of the game in the last few years (Hassan et al., 2007). Based on this statement, we chose as the main aim of this research, to determine the somatotypes of 48 female players- all the wing players registered in the best handball league for seniors, in Romania. We used Heath & Carter Method (1967) to calculate somatotypes for all the female players who were involved in this study. Based on the obtained results, we identified the differences between the subjects participating in the study and we created the somatic profile of the female wing player, from the best Romanian handball league. Identified data were also compared to those measured in the Spanish elite female handball players (Vila Helena et al, 2011).

Keywords: Anthropometry, handball, Wing player, Somatotype
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THE HIGHER AEROBIC CAPACITY LEVEL IN WATER-POLO PLAYERS – JUNIORS III

Marinescu Gh.a, Ticală L.D.a*, Zamfir V.M.a, Bidiugan S.N.b

a UNEFS, 140 Constantin Noica St., 060057, sector 6, Bucharest, Romania
b INCS, 41A Basarabia Blvd., 022103, sector 2, Bucharest, Romania
*Corresponding address: ticala_laurentiu@yahoo.com

Abstract

The water-polo game counts among those sports in which acyclic movements are predominant. The recent modifications brought to the game regulations have led to an increase in speed and complexity during the attack and defense phases. The proportion of the dominating energetic systems in the water-polo game is the following: alactacid 10%, lactacid 30%, aerobic 60% and the performance-limiting factors are represented by the acceleration power, the throwing power etc., all of them related to a solid aerobic basis. The obtained results after the administration of the T-2000 test establish the individual limits within which the athletes can train themselves in certain effort zones. According to these limits, we present the average movement speed on a 50-meter distance, in order to improve the higher aerobic capacity in water-polo players: for the stable O2 zone (aerobic endurance) - 1.06 m/sec., for the relative O2 zone (aerobic-anaerobic threshold) - 1.12 m/sec. and for the VO2 max zone - 1.17 m/sec.

Keywords: aerobic-anaerobic threshold; T-2000 test; VO2 max.
Abstract

We are being the witnesses of a phenomenon involving the decrease of the average age of Olympic and world champions and of the new trend of sports debut at an early age because achieving world performance implies at least 8 years of training. All these arguments justify the necessity of early training in athletics starting with the age of 6-7, which is substantiated though on a coherent strategy meant to valorise the "golden" age of learning through the harmonious mix of the 3 M (methods, means, materials). Based on the idea that pleasure removes boredom and increases the efficiency of the activity, we have designed a training programme with means from athletics in order to study its impact on speed. The study was conducted over a school year, for a period of 10 months (the children took part in 2 lessons per week with a duration of 90 minutes), starting with an initial testing, an intermediate testing (after 5 months of application) of the athletic programme and a final testing at the end of the school year. Following the statistical processing, we noticed an improvement of the speed as compared to the control group.

Keywords: speed; early training; antepuberty age; children
Evaluating and Correcting Technical Errors in Breaststroke and Butterfly Swimming Performance

Jari Sabri¹a (Tunisia), Marinescu Gheorghe²a, Rebai Oussema³a

¹UNEFS, 140 Constantin Noica Street, sector 6, Bucharest, 060057, Romania
²jari.sabri@yahoo.com, ³georgemarinescu@yahoo.com, ⁴ouss_swim@hotmail.com

Abstract

To obtain the proper technical and optimally adapted to his means clustering, the coach falling on the training generally use assessment and adjustment of technical gestures swimmers. The technical assessment of swimmers is first of all, observation being defined by fraise, in 1963 as "the simplest method that can cause remarkable facts". Teaching observation sustained by adequate and fair technical support can be a guide for coaches to support more efficient management of training, an advancement of the processes and technical butterfly breaststroke. Given the gaps that have heaped falling on their sporting career. The goal of this study was to observe technical fouls for assessment in Breaststroke and Butterfly. Our objective is the effect of an individualized technical work to correct errors for the swimmers of national team program. Pedagogical observation supported by a suitable carrier could serve as a medium for live sufficient enough coaches for better managing the conduit of technical training and advancing breaststroke and butterfly.

Key-words: evaluation; observation; technical correction
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Strength development by using mechanical vibrations

Adrian Pricop, Ileana Dragulin, Leonte Nicoleta

University Politehnica of Bucharest, Splaiul Independenţei, No, 060042, Romania

Abstract

Mechanical systems of production and recovery of vibration acquire more and more unique role of training equipment, and vibration effects obtained on muscle contraction or relaxation reflex facilitating depending on the possibility of adjusting their parameters. Vibration training platform generates a tonic stretch reflex in all the muscles involved in the effort. During this reflex, muscles contract and relax at very high speeds and the amount of activated fiber reaches 95% of all muscle fibers involved in the effort. In this study we used a mechanical vibration platform. Mechanical vibration platform in its composition presents a framework of steel pipe, an air suspension control and integrated. Frequencies generated by the platform are 25 Hz, 30 Hz, 35 Hz, 50 Hz and duration of exercise performed on the platform of 25,30,45,60 seconds. This research was carried out in order objectification that these of mechanical vibrations in the training will improve the training and development to increase the strength athletes. Other beneficial effects have been observed experimentally for the coordination, bone density and blood circulation. Of course there are unwanted side effects, especially when proper dosage is not respected). They refer to internal organs and delay resonance strengthening tendons, which may increase the risk of injury. These results confirm the hypothesis of research, that if the athletes training in the judicious use of low and medium mechanical vibration frequency will be highlighted when the results achieved by improving jump height.

Keywords: Mechanical, muscles, Sport;
Biomechanical Factors Associated with the Elbow Injury Risk in Throwing Athletes

Ivan Corina*, Popescu Lavinia*

* National University of Physical Education and Sports, 140 Constantin Noica Street, 060057, Bucharest, Romania
* Corresponding address: corinajavelin@yahoo.com

Abstract

The throw, a fundamental motor skill that can be more or less refined, is used as a motor gesture within a wide range of sports activities which culminate with the athletic throwing events. In this case, regardless of their basic mechanism, the final goal is to obtain a distance as long as possible between the place where the object is released and the place where it lands. In other sports disciplines, the throw is intended to place the object on a certain trajectory, towards a precise target. Finally, there is another category of sports (such as tennis and volleyball), in which some movements (the serve, for instance) are similar to the hurling-type throw. Through their ballistic nature, they represent actions with an injuring potential on the athlete's shoulder and elbow. The present study aims to highlight the existing connection between some biomechanical aspects of throwing and the microtraumatic elbow pathology.

Keywords: throwing events; biomechanics; injury; elbow.
Stimulating the Aerobic Potential Using the Circuit as Methodic Procedure

Dan BADEA

National University of Physical Education and Sport, 140 Constantin Noica, 060057 Bucharest, Roumania

Abstract

The purpose of this study is to improve the aerobic level of the rugby players using the circuit. This method offers a new perspective on the methodic procedure called circuit, used, in general, for endurance strength development, for reducing the level of fatigue during the anaerobic strength exercises, for the lactate threshold, and for the gain of the anaerobic power flow.

This research is an applied one, and it took place on two years. The subjects that agreed to participate on this research are the CSO Pantelimon players from the National Division of Rugby for the first year, and the players from RCJ Farul Constanta from SuperLiga CEC Bank for the second year of research. The research was made throughout the running test of 1 km, test that is specific for testing the aerobic level, and throughout monitoring and performance monitoring. The research methods were: the scientific documentation, the observation, the experiment, measurements, the statistical-mathematics method, the graphic method. The results of the research are shown from the circuit trainings that revealed the improvement of the aerobic power for the rugby players that agreed to participate in this research.

Keywords: aerobic, power, workshop
The Correlation Between the Maximum Instantaneous Anaerobic Power (MIAP) and the Speed at the Handball Players

Hantău Cezar\textsuperscript{a}; Hantău Cristina\textsuperscript{b}; Mario di Carlo\textsuperscript{c}; Marica Laura\textsuperscript{d}\textsuperscript{*}

\textsuperscript{a}National University of Physical Education and Sport, Constantin Noica 140, Bucharest, 060051, Romania
\textsuperscript{b}Academy of Economical Studies, Mihail Moxa 5-7, Bucharest, 010961, Romania
\textsuperscript{c}ISISS Cicognini-Rodari, Prato, Italy
\textsuperscript{d}Universitatea Petrosani, Universității 20, Petrosani, 332006, România

Abstract

The specialty literature provides very few works defining the handball game effort patterns. By watching a handball game, we can easily notice that the most intense actions are developed while accelerating, which requires a great explosive strength. According to Konzag, a handball player performs during a game 190 changes of rhythm, 280 changes of direction and 40 jumps, which correspond to 509 accelerations, namely around 9 explosive actions per minute. Because we can’t talk about an isolated gesture, but about numerous actions of starting, stopping, direction changing and jumping, separated by short break moments, it isn’t difficult to understand that in handball the consumed energy is mainly provided by the anaerobic, alactacid and lactacid metabolism, which is sustained and recharged by the anaerobic metabolism. Following the considerations above, we will try to see if there is correlation between the maximum instantaneous anaerobic power and the speed at short distances. We also want to see how these two parameters influence each other.

Keywords: speed, power, handball, correlation
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The Acrobatic Elements Impact on Muscle Strength Development in Volleyball Players

Cosma Alexandru\textsuperscript{a}, Ortanescu Dorina\textsuperscript{b}, Rusu Ligia\textsuperscript{c}, Marin Mihnea\textsuperscript{d}, Cosma Germina\textsuperscript{b}, Pascu Dănuţ\textsuperscript{b}

\textsuperscript{a}University of Physical Education and Sport, Bucharest, Romania
\textsuperscript{b}Methodic and Theory Department, University of Craiova, Craiova, Romania
\textsuperscript{c}Sport Medicine and Kinesiology Department, University of Craiova, Craiova, Romania
\textsuperscript{d}Applied Mechanics, University of Craiova, Craiova, Romania
* Corresponding address: germinacosma@yahoo.com

Abstract

The purpose of the research was to optimize the physical training in junior volleyball players (age 18) by introducing in the training work programs that, once a week, had basic elements of gymnastics and acrobatics in their structure. The subjects of the experiment group (n = 10) were tested before and after the implementation of the programs (10 month), monitoring the superior limbs, lower limbs and abdominal strength, as well as the back strength. In the final test, the force recorded higher values, compared with the first test results, the statistical analysis of the data obtained (p <0.001), following the tests applied, highlighting that the specific means of gymnastics can be used successfully in the physical training of junior volleyball players. Applying the d index (Cohen) of effect size between control group (n=10, age 18) indicated a large effect (between 1.34 and 2.54), with a significant difference between the average levels of the strength testing between the two groups at final testing.

Keywords: junior; jump; gymnastics means; physical training.
Abstract

Major competitions destined to basketball game are characterized by the complexity and rapidity of the attack and defense phases. Players with better distributed attention can be positioned in key-points and invested with many tactical tasks. This research aims to present the basketball coaches the results obtained after the administration of the attention mobility test, the Prague test (of distributed attention). We consider that the optimization of the attention mobility and distributivity will lead to an efficient management of the attack and defense actions, in order to implement the game tactics and to reach notable performances.

Keywords: attention mobility; basketball, PRAGUE test.
Biomechanical Analysis of the Horizontal Jumps – Comparative Study of Athletics on the National and International Level

Corina Țifrea¹, Raluca Costache¹

¹ National University of Physical Education and Sports Bucharest

Abstract

An important source of understanding and perfection of athletic events is the knowledge and application of the biomechanical laws to the study and analysis of motive actions specific of athletic events. At the current level of sport performance, without a precise and thorough technique improvement work, it is impossible to advance towards outstanding results. The lack of a rational technique even becomes a limitative element in enhancing the psycho-motor skills of the athlete. The athletic exercise technique shall not be evaluated exclusively from the kinetic point of view (succession of apparent moves), but also in relation with the forces involved in its development, that can be hardly seen from outside, and therefore in relation with their dynamics. Thus, the kinetic evolution of the moves is just a component of the space-time technique, while the athletic exercises may be also carried out are based on dynamic processes, integrated in one’s kinetic evolution. Thus, we may say that technique means the most rational and economical use of the kinetic and dynamic potential.

Thus, by reducing the human body to a system of segments and considering it a commonplace mere object and therefore subject to the general laws of mechanics, in order to analyze a given move, we shall determine and analyze forces acting upon one’s body.

Keywords: Athletics, technique, long jump, triple jump, biomechanical analysis

Corresponding authors: Prof.univ.dr. Corina TIFREA
E-mail: c.tifrea@yahoo.com
Coaching success assessment depending on the relation between self-assessment results and process perception by the athletes

Cristea Dumitru*

*U.N.E.F.S. Bucharest, Constantin Noica, No. 140, 060057, Romania

Abstract

In the activity of training athletes, the coaching is functionally characterized by a series of features related to: the understanding as mutual process between the coach and the athlete, the first influencing and being influenced by the variables of the athlete and of the environment; the transformational process of conduct in a transactional relation; process of cooperation between the leader and his athletes; process of achieving the athletes’ objectives and the coach’s personal objectives. Coaching success assessment involves two groups of behavioral elements belonging to the coach, on one hand and to the athletes, on the other hand, these groups being analyzed from two pints of view: a) the coaching as process based on collaboration, devotion, social-emotional and mutual trust relations and b) the objectives, target, increased responsibility, monitoring-communication, coordination and self-drive oriented coaching. The above mentioned premises have determined the need to draw-up three questionnaires focused on: a) the coach self-assessment, b) appreciation of success as coach, c) how are the athletes perceiving the coaching process? Samples studied: 20 male and female teachers and 20 boys and girls.

The self-assessment was conducted based on the frequency of current assessments, motivation assessment, the need for communication, clarity of delegated tasks, investigation of the team’s opinions, etc., all of these related to the preferred leadership styles. The ensemble of data gathered is directing towards drawing-up a Guide for efficient application of coaching.

Keywords: coaching in sport, transactional process, self-assessment, perception of coaching
Level of coordinative and performance capabilities to the juniors groups in badminton

Timofte Daniela*

Abstract

Sport of explosion, based on a special technique and a relatively small movement, badminton requires an excellent physical condition. In this context, coordinative capabilities are designed to ensure rapid learning of technical procedures and tactical structures. The purpose of this study is to analyze both the coordinative capabilities and the capacity of sport performance to juniors groups in badminton. To obtain more relevant results for identifying the level of coordinative capabilities, we used the following variables: time-space orientation, kinesthetic differentiation, motor response and rhythmicity capabilities.

In terms of sport performance capacity, to obtain significant results, we used a wide range of observation protocols of techniques used by athletes during games. The obtained results are solid basis for establishing causal relationships between coordinative capabilities and achieving sports performance in badminton.

Keywords: badminton; coordinative capability; performance capability;

* Timofte Daniela. Tel.: +40723638757.
E-mail address: daniela_timofte@yahoo.com
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Study about the Dancers’ Performance Behavior Optimization

Constanța Urzealăa*, Adrian Nicoarăa

aUNEFS Bucharest, 140, Constantin Noica St., Bucharest, 060057, Romania

Abstract

The present study aims at identifying the effectiveness of some training programmes focused on objective criteria for assessing the choreography execution quality in competitions, which can lead to the dancers’ performance behavior optimization. The research was conducted on a sample of 12 athletes aged between 12 and 14, belonging to Magic Dance Club of Bucharest, during a precompetitive mesostructure prior to a national competition in 2013. Dancers were initially and finally tested through a modified version of the execution quality assessment scale presented by Barrow and McGee. The training process between the two testing sessions had a content based on the competition choreographies and on instruction goals directed to the components of the administered assessment scale (body and limb control, technique of performing the dance steps and moves, motor rhythm and musicality, fluidity and expressivity, mutual cooperation and action leading). Statistics indicated a significant increase in the dancers’ execution quality, as a result of the implemented training methodology. This emphasizes the opportunity to manage the training relying on some objective assessment criteria, which enable the dancers to better express their performance capacity and valorize their aptitudes in the competition choreographies.

Keywords: dance, assessment, quality, training.

* Constanța Urzeală. Tel.: +40-021-316-6407
E-mail address: ritmicuta@yahoo.com
The Olympic Games, Whereto?

Monica Bucur Stanescu\textsuperscript{a}, Alisa Margina Mileah\textsuperscript{a}, Mihaela Zahiu\textsuperscript{a}, Sabina Macovei\textsuperscript{a}

\textit{National University of Physical Education and Sports, 140 Constantin Noica Street, 060057, Bucharest, Romania}

\* Corresponding address: monicabucur@yahoo.com

\textbf{Abstract}

The Olympic Games represent the most important athletic competition in the world, with a huge impact on human society; they have become not only a sports phenomenon, but also a social, cultural and economic one. The sports system development has led over time to a transition from the amateur sport to a more professional component. The present study aims to analyze the way in which media have influenced and eventually changed forever the perspective on the Olympic competition. We shall equally approach in our paper the impact of the Olympic Games broadcasting not only on the athletes’ life, but also on the technical staff, managers and the general population.

\textit{Keywords:} Olympic Games; amateur; counterbalance.
The Importance of the Physical Factor Diagnosis in the Approach of the Artistic Skating Contests at International Level


140 Constantin Noica Street, sector 6, POB 060057 Bucharest, Romania
orlandocris@gmail.com, mariana_apostu@yahoo.com

Abstract

The figure skating is currently characterized by difficulty and complexity, due to the multiple changes in the Regulation of the ISU aiming the differentiation of competitors and the growth of the momentousness of routines in the official competitions. In such context, at international level we notice an increase of the physical factor importance, highlighted by the ability of the top skaters to carry on difficult and strenuous routines. This study aims to harmonize the performance criteria provided for in ISU Regulation with the impacts they have on the elements of the effort sustaining ability of the junior and senior skaters. To this purpose, we aim to identify the perfectible aspects in the evolutions of the Romanian skaters participating to the next Olympic cycle and their impacts on the need to design some physical training programs enabling the execution of balanced skating routines, in line with the technical and artistic requirements.

The obtained information enable us to make objective assessments with regard to the capacity of the Romanian skaters to deal with the current requirements provided for in the regulation and to improve their specific fitness levels - a pre-requisite for the increase of their competitiveness in the goal-targeted competitions.

Keywords: figure skating; performance criteria; functional costs
Abstract. The sport discipline called powerlifting is an active, interesting sport, which is accessible to almost every category of age, sex and physical ability. It is practiced all over the world and it has several hundred thousanded trainees and supporters – sports persons, trainers and officials. It consists of lifting the heaviest possible weight in each of the three attempts: squat, bench press and deadlift. Practiced in an organised way by men and women, powerlifting unanimously considered the most representative strength sport.

Key words: powerlifting, sportsmen, somatopsychic
Study on the Participation of the Basketball Teams from Romania in the European Competitions of the Clubs, in Season 2013 - 2014

Alina Daniela Moanta a*, Iulian Gabriel Ghitescu a

* National University of Physical Education and Sport, 140 Constantin Noica St., 060057, Bucharest, Romania

Abstract. The performance behaviour of the team and the players can be expressed by a number of objectified parameters. The recordings done during our competition allow us to make an objective assessment of the event players and team and separation issues relevant to the characteristics of the teams and the players, establish relationships essential to the quantitative and qualitative evaluation of their effectiveness.

In the current study we proposed to analyse the playing model of the Romanian club teams, participating to the European competitions between clubs, in 2013 - 2014 season, on the premise that, the game model parameters (the parameters of the game model, the game systems used in attack and defence, the players positions model) registered in the major international competitions, become operational objectives for the training process, causing weight components in sports training, this working model ensuring the training effectiveness.

We believe that this major international competitions analysis, leads to each specialist knowledge of current trends and guidelines of the game of basketball, creates the sports training paves modelling, in order to achieve the level of performance value shared by the global basketball world.

Keywords: Performance, game model, parameters, recordings;
Aspects Regarding the Analysis of the Biomechanical Parameters and the Variation of the Travel Speed in the Women’s 400 M Hurdles – London Olympics 2012

Stoica Marius*

National University of Physical Education and Sport, Constantin Noica Street, No. 140, 060057, Bucharest, Romania

* Corresponding address: mariusstoica08@yahoo.com

Abstract

The difficulty of 400m hurdles sample is recognized by all specialists in Athletics. In this context, we try a detailed analysis of the various parameters that can influence the performance in this sample. Such analysis involves on the one hand aspects related to height of athletes with reference to dynamics of running, through the influence of optimal ratio between frequency and stride length, with the emergence of the obstacle, and on the other hand, it is the biomechanics developed by athletes, depending on the control of steps between hurdles, specific strength, fast strength and especially the technique of running and crossing hurdles. For this purpose, we will research the variation of travel speed in the final of 2012 London Olympics (in top three), trying to optimize the ratio between the length and frequency of steps during the 400m hurdles race. The analysis of these parameters was made possible by high-performance video, that allow us to analyze the potential of each athlete, according to its height with influence on technical parameters: stride length, frequency of steps, number of steps until the first hurdle and performance achieved in 400m hurdles sample. We also analyze the aspects related to travel speed by calculating speed on separate spaces and on spaces added, taking into account the appearance of ten hurdles.

Keywords: biomechanics; travel speed; 400 meters hurdles;

* Corresponding author. Tel+40722725518
E-mail address: mariusstoica08@yahoo.com
Abstract

One of the most complex, fascinating and challenging athletic events is the pole vault. One of the key factors to achieve performance in athletics, in jumping in general and at pole vault sault in particular, is on elk speed achieved. Thus, we conducted a study of it in the pole vault jumper in the final stage of Athletics National Championship Junior III held in Bacau, in March 2014.

Hypothesis we started in conducting the research was to determine whether approach affects the final performance obtained. For this purpose, we have used Microgate race timer 2 device for data collection. The speed was measured in the last 10 m of the elk run as follows: the first pair of photocells was set to 4 m from the end of the box support the second pair of photocells were located at 9 m from the end of the box support and 5 m from the first pair of photocells, the 3rd pair of photocells were set at 14 m from the end of the box support and a 5 m from the second pair of photocells and 10 m from the first pair of photocells. Thus we obtain the speed on the last 10m and the results can indicate if we have an accelerate or decelerating speed on elk. The results were analyzed using SPSS 20 software and also the results were compared with those of world champions at this athletic event.

Keywords: Pole vault salt; Microgate Race timer 2; speed aproach
The Influence of the Lower Body on the Strikes Impact in Full Contact

Baitel Irina\textsuperscript{a}, Cordun Mariana\textsuperscript{a}, Deliu, Dan\textsuperscript{a}

\textsuperscript{a}UNEFS, Constantin Noica 140 Street, Romania
irina_baitel@yahoo.com, mariana_cordun@dr.com, anjvb@hotmail.com

Abstract

In the Biomotricity and Physiology Laboratories of the National Research Institute for Sport we have tested two subjects, multiple national and international champions of full contact kick-boxing and Thai boxing. We used surface electromyography, inertial navigation technology built into MOVEN equipment from Xsens, Netherlands and video recording. Subjects applied full contact direct punch jab and cross in a boxing bag supported by a teammate. Electromyographic sensors were applied to the main muscle groups involved in the punch on the entire length of the kinetic link. On one of the channels electromyograph it was installed a pressure sensor mounted on the subject’ s boxing glove. Thus we obtained information regarding the impact, namely its duration as well as the relative pressure contact of the glove (pressure sensor) with the boxing bag. Since the inter and intra muscular coordination of the muscle of the upper body is not alone responsible for the strike force of the punch, we seek to demonstrate how the lower body involvement contributes to the goal of achieving the maximum force of the punch.

Keywords: cross, jab, electromiography, full contact, lower body
Anticipating injuries on the basis of measuring functional and structural simmetry utilizing tensiomyography, electromyography and modified Miron Georgescu method

Patru Luminita*, Negulescu Ion

*UNEFS Constantin Noica 140 Street, C.P.060057, Bucharest, România
**UNEFS Constantin Noica 140 Street, C.P.060057, Bucharest, România

Abstract

Through this study we aim to highlight a correlation between functional and structural muscle asymmetry and the likelyhood of injury to the joint in which it is manifested. We conducted a case study on a subject from the initiation group in martial arts - karate shotokan, aged 23 years, right-handed. The measurements were performed in the physiology and biomotricity laboratories of the National Research Institute of Sport – Bucharest. We utilized the tensionmyograph to record the muscle’s response to bipolar stimulus, which allowed us to calculate the time of contraction, the time of relaxation, the time of maintenance, the time of delay and the amplitude of contraction. The subject performed the modified Miron Georgescu 15 attempt and simultaneously were made EMG acquisitions utilizing the electromyograph Delsys 23. There was obtained more information, whereof we are interested on: the average unit power, the power difference in absolute value between the left and right foot, the difference between the average unit power on both legs and the sum on the right foot and left foot, which offer information about the balance between the strength component, the speed component and the possible maximal unit power. Using the EMG there were monitored 14 muscle groups and on two of the EMG’s channels there were installed two pressure sensors to monitor the contact with the ground during the conduct of the MGM 15 attempt.

Keywords: tensiomyography, structural asymmetry, functional asymmetry

* Corresponding author. Tel.: +40723408327
E-mail address: lumipatru01@yahoo.com
Zoning the Effort for Swimmers in Backstroke by Applying the Vam-Eval Test

Oussama Rebai, Marinescu Gheorghe, Jari Sabri

*Universitatea Națională de Educație Fizică și Sport, Constantin Noica 140,C.P. 060057 Bucharest, România.
*oussemalegrand@gmail.com; georgemarinescu@yahoo.com; jari.sabri@yahoo.com

1. Introduction

Using VAM-eval enables a better objectification of effort parameters in training, correlated with biomechanical and physical features of the swimmers, closely with the areas of effort.

2. Purpose

The study of percentages in which are swim the 100m and 200m sport tests, backstroke, using the VAM-eval test; the correlation between different biomechanical and physical parameters (rate and frequency of swimming, speed swimming / VAM-EVAL) in competition and the relation to the effort areas.

*Keywords: VAM-eval; VO2 max; swimming index; swimming frequency.*
Improving the Offensive Efficiency in Volleyball Game by Using A Specific Statistics Software

Dan Alexandru Szabo, Laurentiu Magdas

National University of Physical Education and Sport of Bucharest, Constantin Noica Street, Bucharest, Romania
National University of Physical Education and Sport of Bucharest, Constantin Noica Street, Bucharest, Romania
danutsszabo@yahoo.com, laurentziu@hotmail.com

Abstract

The specific training for sports performance is a complex system which involves the existence of a mediator capable of ensuring a positive influence of the phenomenon. Based on concepts, principles, laws and their axioms, the general theory of systems and informatics can provide a significant influence in terms of quality, through an interdisciplinary approach, by increasing the meaning of information fields, through the improvement of information systems and information technologies (software customized to specific issues). The modern volleyball game is characterized by speed and variety of actions, due to the continuous improvement of operations as tapping the ball increasingly higher, creativity in building combinations and flexibility in choosing the offensive and defensive systems. The research aims to create and, where appropriate, to structure, divide into periods and reconfigure quantitative and qualitative, longitudinal and transverse training programme, depending on the data and information provided by the program Click & Scout, in order to improve the teaching and learning process in volleyball, with beneficial effects on players' performance ability growth, technical-tactical attack action improvement and team default, leading finally to obtaining better results in competitions.

Keywords: Attack; Sport; Defense; Volleyball; Performance.
Study Regarding the Assessment of the Specific Motor Capacities' Level in Rhythmic Gymnastics

Manos Mihaela*, Gavojdea Ana

* National University of Physical Education and Sport, 140 Constantin Noica Street, sector 6, Bucharest, 060057, Romania

Abstract

The theme of this research consists of a theoretical and scientific – methodical undertaking imposed by the requirements of training elite teams for the group competition, thus being subjected to experimental trials which represent new dimensions of the methodology for training of selected and involved gymnasts in order to achieve international valuable sportive performances. Taking into account the evolution of technical – artistically and execution requirements related to the competition routines, which are involving exceptional motive skills, this complex issue must be approached within a training methodology establishment strategy ensuring an increase of the specific effort and of the performance capacity of elite gymnasts in the ensemble demonstration. To know the athletes' potential requires on organized, methodical and consistent assessment which must be an inherent part of the planning process and seeking to objectively quantify their evolution. To this end we have selected the following assumption: Whether the content of the test and trail sample indicated for the training, respectively, research complexity is able to meet the multiple requirements of high performance sportive activity, typical for the rhythmic gymnastics ensemble demonstration. The analysis of MGM-15 and balance tests acknowledges the progress achieved by the gymnasts at the level of all research parameters.

The content of action structures, as well as the methodology for applying and testing them, has contributed to the development of motive skills at higher parameters. The motive structures, proposed by us, are appropriate for the development of particular motive skills involved in this sport segment, creating the link between the control tests and training content and represent a first step towards planning, standardizing and rationalizing the motive content specific to the physical training in rhythmic gymnastics.

Keywords: sport training, rhythmic gymnastics, physical qualities
Abstract

The aim of that investigation was to verify the synthetic measures of development (aggregation methods) for diagnosing the performance of young soccer players. A detailed statistical analysis was applied to the results of a investigation into a group of 70 persons, i.e. 15-year-old soccer players. The statistical model of research implied the following system of variables: \( X_0, Y_1 \), i.e. one multivalent dependent variable, \( n \) multivalent independent variables. The role of the independent variables was given to the measurements of the body build features, general and special physical efficiency and the psychological profile. The dependent variable was calculated based on the Hellwig’s algorithm. Based on the calculated coefficients of the regression equation it can be concluded that the dependent variable - athlete’s development indicator - is significantly improved in the examined persons by features such as total work output, maximal power, special test and location of control. The biometric model built for the investigation explained 99\% of the variation in the sports development levels of 15-year-old soccer players. It can be concluded, therefore, that the variables making up the optimal combination of the regression model's explanatory variables are good predictors of the sports level characterizing young soccer players.

Keywords: optimal selection; youth soccer; predictors
Impact of changes in "Code of Points" in the Olympic cycle 2013 - 2016 Men’s Artistic Gymnastics to the Floor Event

Corlaci Ionut*

U.N.E.F.S., Str. Constantin Noica No. 140, 60057, Romania

Abstract

Artistic Gymnastics Code of Points in Male suffers major changes every four years after every Olympics Games, and other minor additions changes, when and if it is it necessary during the Olympic cycle in progress. Male Artistic Gymnastics Technical Committee of the International Federation of Gymnastics is concerned to find the best and effective rules and solutions. Experience of the committee members contribute to changes in "Code of Points". I start this research after I saw the Floor apparatus finalists, first major competition in this Olympic cycle in progress, namely, the World Championships played in October 2013, Antwerp - Belgium. The main research method that I used in this study is method of study video. The purpose of this study is to highlight the following:

- New direction in training to the Floor exercises apparatus;
- The effectiveness of evolution gymnast’s finalists to the Floor event;
- Improving the best elements, families and groups of elements, combinations and binding elements that gymnasts should include them in their exercises so that they can gain access in the Floor apparatus finals and even have real chance at a world medal.

Keywords: Type your keywords here, separated by semicolons;

* Corresponding author. Tel.:+40723305038; E-mail address: ionut_corlaci@yahoo.com
The Use of the Computer for the Analysis of Motricity Level at Volleyball Players

Alexandru-Rares PUNI, Cristina-Elena MORARU, Liliana-Elisabeta RADU
Faculty of Physical Education and Sports, "Alexandru Ioan Cuza" University, Toma Cozma st, Iasi, Romania
alexandru.puni@uaic.ro

Abstract: The computer became an indispensable component of our lives and it is used in most fields of activity. Therefore, IT analysis programs are used more and more often by coaches and teachers as well, in order to optimize sportive training and obtaining better results in competitions. The aim of this paper aims at the analysis of the motricity level at volleyball players of CSS Unirea Iasi, division cadets and juniors, by using the IT programme conceived and applied by the Romanian Federation of Volleyball. The lot included in the research was made up of 21 athletes, with an average age of 15.23. They were applied 7 sport tests: vertical momentum jump, vertical standing jump, lateral shifting 4 m /45 seconds, the spine mobility at the anterior plan, the force and resistance of abdominal muscles, three momentum jumps and 3 x 6 m shifting. The initial testing was applied at the beginning of the competitive year 2011-2012, while the final was applied at the beginning of 2012-2013. Upon analyzing the results, we note the Student test was in 5 of the sport tests had a significant value \( p<0.05 \), while in the other 2 sport tests, even if the results improved, the differences were not significant statistically speaking. The motricity index registered an increase of the average if we compare the initial testing \( (3.13\pm0.82) \) with the final one \( (3.62\pm0.52) \). It is considered statistically significant. The conclusion is that the level of motricity obtained by the athletes shows their degree of training, which allows them to participate at the national competitions.

Keywords: Analysis; motricity; competition; volleyball.
Physical Impact Analysis of Specific Means of Individualization Football Training Positions at the Level of the First League Teams in Romania

Viorel Cojocaru, Ciprian Panait

National University of Physical Education and Sport, Constantin Noica Str., Nr. 140, Sector 6, 060057 Bucharest, Romania,
 Corresponding address: cipi.rapid@yahoo.com

Abstract

The large differences we observe between League 1 teams from Romania and European football teams, we are determined to try a targeted analysis of the causes which they determine. Given that starting point, in this scientific approach, practical experience, we intend to highlight the defining aspects of football influences specific means used in training a League I team in order to pinpoint training positions. In this paper we emphasize how the use of specific means football contributes to reducing the differences in value between our football and European football. So, in the training program will be used means which involves the use of the ball and the opponent’s presence. During training, the effort will be monitored using POLAR system, allowing accurate determination of the physical impact of the specific means used. Then, based on the data thus obtained, we can individualize the training positions. We can not get to practice good football that rise to the opponents, if not individualized training so that each player be trained in specific situations for the post he plays.

Keywords: training; effort; football; individualization.
Syntetic Analisys of the Dinamycs of Romanian Females Athletes Best Results Between the Years 2004-2013

Zanca Raoul Ştefan*, Zăgrean Eleonora

*a “Babeş-Bolyai” University of Cluj-Napoca, 1 Mihail Kogălniceanu street, Cluj-Napoca, 400084, Romania
* Corresponding address: 7 Calea Moldovei street, Bistriţa, 420096, Romania, e-mail: zancaraoul@yahoo.com

Abstract

The purpose of this study is to highlight the most notable records of Romanian female athletes in both major competitions and the presence among the world’s best results ever. After analyzing these data we will see that in different periods of the Romanian female athletes history, there have been excellent results in different athletic events. We will observe that in certain periods Romanian female juniors promised important results to the senior future and formerly the Romanian female juniors did not score at all. We will try to offer an explanation of the dynamics of Romanian female athletic results for the most important categories of competition, not least to emphasize the importance given to certain events over time at certain ages.

Will notice that in certain periods of history were dominant athletes aerobic samples in other anaerobic and those based on power and muscle strength and last but not least you will notice a correlation between senior and juniors results in the same time period.

Keywords: female athletes, records, dynamics, events
Abstract

This paper aims to determine the structural trend of the struggle for women's judo athletes participating in the Olympics in London in 2012. Structure is an important fight for the establishment of national teams training strategy. The data we obtained during the investigation, in agreement with similar studies conducted internationally, demonstrates that “the determination of the fundamental elements during battle”[1], allows athletes and coaches to properly plan preparation. Hypothesis thesis, according to which the determination structure fight for last Olympic Games help develop and optimize preparedness plans in the medium and long term, based on determining the technical and tactical combat effectiveness is confirmed by the data recorded and processed. Methodology of data collection, recording and processing factors required techniques of fight in 112 technical actions, recorded video, female judoka performed during the Olympic Games in London in 2012. Were determined battle technical components of the model for each weight category. In conclusion, these data allow establishing objectives, future performance, eliminating unnecessary costs and avoidance training in training and competition wear.

Keywords: judo, performance, structure struggle, preparation, olympic games
Analysis of Muscle Activity with the Kinematics Parameters Depending of the Weight of Loading (Case Study)

A. Gołaś*, A. Maszczyk¹, A. Zając¹, P. Pietraszewski¹, R. Rocznioº¹, W. Michał¹, M. Czuba¹ H. Król²

¹. The Jerzy Kukuczka Academy of Physical Education in Katowice, Dept. of Sports Training.
². The Jerzy Kukuczka Academy of Physical Education in Katowice, Dept. of Human Motor Behavior

Abstract

Bench press is a basic exercise what prepares competitors participating in both individual and team sports. It is also one of sports discipline in World Championship. In this study participated twenty healthy man however one was selected for analysis (G.S.; age: 24 yrs; height: 171 cm; body weight: 77 kg; RM in bench press: 135 kg). Fundamental purpose of the study was analysis of muscle activity with the kinematics parameters depending of the weight of loading. In the research there was activity of four muscles taken under consideration: pectoralis major, anterior deltid, triceps brachii and latissimus dorsi. Structure of the movement flat bench pressing depending of the weight of loading consists of: bioelectrical activity four muscles: pectoralis major, anterior deltid, triceps brachii and latissimus dorsi; vertical acceleration; vertical velocity, displacement in three planes (vertical - Sy and horizontal - Sx – parallel to the line of the shoulders; Sz – from the shoulder towards the nipples contrariwise),

Key words: bench press, muscle activity, kinematics parameters

* Corresponding author. Tel. +48668130099; fax: +0-000-000-0000 .
E-mail address: a.golas@awf.katowice.pl
The Characteristics of Attention in Perceptual-Motor Disciplines: Alpine Skiing and Judo

Grosu Emilia Florina a*, Grosu Vlad Teodorb, Popovici Corneliac, Preja Carmen Anetad

a Babes-Bolyai University, M. Kogalniceanu 1, Cluj - Napoca, 400084, Romania
b Technical University, Muncii Street 103-105, Cluj - Napoca, 400641, Romania
c Medicine and Pharmacy University, Cluj - Napoca 405300, Romania
d Technic University, Cluj - Napoca, Departament of, Baia- Sprie, Maramures, Romania

Abstract. The importance of attention in achieving sports performance inspired me to write this article. Individual differences in working memory capacity and the control of attention were related to daily failures, attention decreased slowly, latent every day, cause of distraction or wandering mind. (Unsworth, Nash. McMillan, et al 2012). Why we chose this topic is related to the importance and place in the cognitive process of attention in preparing athletes practicing judo and skiing. Both sports are based on perceptual-motor skills; motor acts always depending on the impact of external factors. The victory in both sports depends on how athletes manage their attention, either is concentrated, distributive or observational spirit as a perception of attention and spatial representation. Methods: Lots of athletes who participated in the experiment consisted of 33 athletes (11-15 years) members of various skiing sports clubs from Romania, and the judo group - team of Romania (13 athletes). The following attention tests were applied: focused-AM, distributive-AD and perceptions of attention and spatial representation-AP2 as observational spirit. Results: in Test MA - lack of statistically significant differences between the two groups; in AP2 - lack of statistically significant differences between the two groups, in AD test statistically highly significant differences between the two groups. Various exercises should be made with athletes in training before the competition in order to increase the concentration indices of attention. This will increase the perception of attention, and distributive attention.

Keywords: attention, alpine ski, judo, psychological preparation.

* Emilia Florina Grosu Tel.: +40 -744- 622-193
E-mail address: emiliaflorina.grosu@gmail.com
Analysis on Biomechanical Dismounts Characteristics of Salto Backward Stretched Landings in Balance Beam Event

Grigore Vasilicaa, Gavojdea Ana-Mariaa, Potop Vladimirb

aNational University of Physical Education and Sport, Constantin Noica, No. 140, 060057, Bucharest, Romania
bEcological University Bucharest, Faculty of Phisical Education and Sport, Bd.Vasile Milea No.1G, 061341, Bucharest, Romania

Abstract

The main purpose of this paper is to highlight the dynamic and kinematic characteristics of landings of dismounts with salto backward stretched with the twist in the longitudinal axis of the body, at the balance beam, at junior level gymnasts aged 12-13 years. This scientific approach has led to the organization of a study on the evolution of junior III women gymnasts, within the Junior III, II and I Individual National Championship, Oneşti 2013. In the study were used the following methods: study of bibliographic research, observation method, biomechanical video analysis method, using Kinovea and Phisics Toolkit programs, the statistical method and graphic representation. The study subjects were the 8 gymnasts qualified for the final of junior III at balance beam, within the Junior III, II and I Individual National Championship, Oneşti 2013. The study results revealed the biomechanical characteristics of the balance beam landings, regarding the sportive technical phases of dismounting, execution technical mistakes in accordance with the sportive performance obtained in the contest.

Keywords: dismounts; landing; biomechanics; balance beam; sports performance.
Considerations about Factorial Preparation in Football/Soccer Game

Lilian Nucu Antohi
UNEFS Bucharest, Str. C. Tin Noica no.140, sector 6, CP 060057 Romania

Abstract

In our research, we’ve gone on the assumption that the process of preparing the junior football players, could be improved through the factorial planning of training and raising the quality of its management. The object of research is the process of planning on training factors of contents of junior footballers in training management. Aim of this study is the development of management plans of the training on the training factors, for one year at a competitive football team-juniors.

Objectives of the research.
1. the study of management athletic training factors in football, junior level A;
2. determination of the content of training for junior football.
3. argumentation and experimental verification of the plan preparation factorial at the junior footballers in training management.

For this study we applied ten questions, from a number of 56 coaches the Romanians, who works in with juniors and in the first division. Survey of specialists in the issue of sports training in football was illustrated in tables and figures in geometric representation. We present below some selective acknowledgments of major significance for the proposed research.

Conclusions:
- most of the coaches interviewed said that working on the development of competition on the microperiod plan according to the qualities of the players;
- coaches treat the factorial separate preparation, taking into account the particularities of the individual or of the posts.

From the replies of the coaches come off need increased attention in preparing junior footballers of the factorial.

Keywords: factorial, physical training, technical, tactical, psychological, coaching, football
Canoea face parte din familia sporturilor individuale, poate fi practicat nu numai în ambarcație de simplu ci și în echipaj de 2 sau 4 sportivi.

Din punct de vedere anatomic, sportivii canoioști folosesc îndeosebi „trenul superior”, brațele, iar din punct de vedere biomecanic poziția canoistului în ambarcație este mai puțin obișnuită, pe un genunchi. Membrele inferioare, dintre care unul este pe genunchi, nu efectuează nici o mișcare, ele îndeplinind un rol important static, oferind sprijin trunchiului și membrilor superioare, care dezvoltă efortul dinamic specific. În procesul de pregătire a viitorilor canoioști de performanță o importanță deosebită este reprezentată de învățarea tehnicii vâslitului.
Comparative Study Regarding the Results of the First 10 Athletes At 2011 – 2012 National Children Championship and the Beginner Children Group

Gorgan Carmina, Prep. Univ. Drd., University "Vasile Alecsandri" Bacău, UNEFS București, Rață Gloria, Prof. Univ. Dr., University "Vasile Alecsandri" Bacău, UNEFS București, Romania

Abstract

Participations to the National Championship for children – the final phase is free and is permitted to all athletes, whether or not they participated at the local phase. The athletes enrolled at the national competitions are allowed to participate at two events (the relay race being considered one of the two events). In 2009, the only running event for children indoors was 600m event, and outdoors the events from the program of the National Championship for Children I was the 800 m running event and the 1500 m running event for both boys and girls. From 2010 until 2012, for boys and girls the events in the program of the National Championships for Children I were: the championships organized indoors for 600m and 800m and those organized outdoors for 600m, 1000m and 2000m.

The purpose of this study is to see the initial level from where we start the preparation for children aged 11-12 years old in the beginners group, compared to the first 10 children at the 600 m event for girls and 800 m event for boys in outdoor settings in 2011 and 2012, at the National Championships for Children.

Keywords: results, running event, children.
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Study about the Efficiency of First Serve in Grand Slam Tournaments for Women Tennis Players

Rares Stănescu

*National University of Physical Education and Sport, 060057, Bucharest, Romania

* Corresponding address: raresuniv@yahoo.com

Abstract
Modern tennis is based on efficiency. One of the most efficient and trained part of the game is the fixed phase because by serve and return the women tennis players can win easily every point. The first serve can be efficient even when the player can win the point with the first hit after the return. Also, the players want to reach this top of the efficiency on the most important competitions, where are very many WTA points to win - Grand Slam tournaments. The research reveals the efficiency of the serve during the WTA Australian Open Tennis 2014. The first serve in this tournament might be a weapon for players because the tournament is played on hard courts. The paper is focused on two things: the efficiency of the first four players’ serve that have reached the semifinals and finals, and the comparison between them and two Romanian players who played also in this tournament. Our analysis is based on the percentage of first serve and the numbers of the winnings on first serve and also the efficiency of first point after the return of the service. The study reveals some useful elements that could improve the training process concerning serve efficiency, first hit after return, serve strategy and helps coaches to find out if the serve and its strategy is the key of success in this kind of tournaments.

Keywords: tennis efficiency; first serve; serve strategy; women tennis players; WTA Grand Slam tournament
E-learning by Means of Biomechanical Study of Movement Phases of Snatch Style in Performance Weightlifting

Ulareanu Marius Viorela, Potop Vladimirb, GeorgescuClaudiac

a,b Faculty Physical Education and Sport, Ecological University of Bucharest, Bd. Vasile Milea nr.1G, Romania
* Corresponding address: marius_ulareanu@yahoo.com

Abstract

This paper is meant to highlight the contents of e-Learning by means of the biomechanical study of movement phases of snatch style in performance weightlifting. The research was conducted during the Junior European Championship of Bucharest - 10.09.2011, in terms of weightlifters’ performance in 56kg class finals. The use of modern methods of research for the computerized video analysis of key elements of snatch style sport technique in performance weightlifting is the basis of applying the e-learning for the improvement of sport technique, for the measurement, analysis and assessment of kinematic and dynamic structure to be used in other strength sport branches and exercises with complex coordination.

Keywords: Weightlifting, biomechanics, phasic structure, performance.
The Enhancement of Neuromuscular Control by Specific Means for Junior Swimmers

Neagu Narcis *

(Polytechnic University of Bucharest, Splaiul Independenței 313, Bucharest, 060042, Romania)

Abstract

Swimming is a sport which implies not only motor (physical) qualities, but also psychomotor abilities as a whole. The latter ones are supported by the functionality of the afferent and efferent systems (apparata). We consider that the full range of the coordination abilities mastered by the sportsman (athlete), the fundamental component of the organizational and regulatory process of the gestural behaviour, may be influenced by the extent of the sensitivity level belonging to the sensorimotor-sensitive systems, respectively by the discriminatory power of the analysers involved in the motion. The more frequent and diverse the influences on the analysers providing data on the motion process, in terms of sensory modality by which they are exerted, the more complex the gestural repertory of the sportsmen without a too considerable physical or mental stress (exertion). Based on these premises, the performances achieved in this subject, within the age category we deal with, must be considered as being the outcome of the sportsmen’s improvement of their psychomotor abilities and not only of their motor ones. The hypothesis on which the study is based is the following: the inclusion, during training sessions, of the methods and means specific to the development of the kinesthetic differentiation ability, may ensure the evolution of the swimmers’ sporting performances.

Keywords: swimming, neuromuscular control in swimmers, specific means for junior swimmers.

*Neagu Narcis Tel: 0040744912126

e-mail adress: narcisneagu@yahoo.com
Developments in the Selection System Applied in Romanian Artistic Gymnastics and the Prospects for High Performance

Hidi Iozsef Laszlo, phd. associate prof., U.N.E.F.S.

Abstract. We are currently witnessing an extremely alarming development in Romanian men’s artistic gymnastics, which may threaten the very future of this sport in this country: a dramatic decrease in the number of young people deciding to take up gymnastics.

Selection in men’s artistic gymnastics is a continuing process, which only ends when athletes decide to retire from high performance sports.

The prospects for high performance in artistic gymnastics depend on the motivation levels of both gymnasts and coaches, the coaches’ professionalism, the amount of work put in by the individual gymnasts, their responsible approach and capacity for sacrifice, but also on the overall number of athletes practising that sport.

Statistical data on the performances achieved by Romanian gymnasts in major competitions over the years reveal a considerable decline in the number of medals obtained; the last time Romania had a “golden team” participating in the Olympic Games was in Athens in 2004 (www.romgym.ro – Results).
Technical training of children and juniors is the main components of the strategy of the Romanian Gymnastics Federation for the future of performances of our gymnasts. For the Romanian Gymnastics Federation this process is a acute priority given the image and tradition of Romanian gymnastics elite sports performance.

Men's Technical Committee is responsible for analyzing the current situation and developing training methodology for children and juniors in line with the trends in male artistic gymnastics.

Technical training to the children and juniors are the foundation of future performance. School experience of Romanian gymnastics federation specialist determines to impose the learning of children and juniors, exercises and elements required. It follows a logical evolution and future of technical training process in conjunction with the requirements of the new Code of Points developed by International Gymnastics Federation.

There are (and will be) many discussions regarding the methodology of children and junior technical training, especially in the current context.
Specific forms of direct communication in sports activities

George Dina, Liliana Dina*

National University of Physical Education and Sports, 140 Constantin Noica, Bucharest, 060057, Romania

Abstract

This paper aims at clarifying a series of aspects related to the communication process specific to sports activities. By considering the communication complexity in sports activities, we shall focus only on the specific forms of direct communication. In this sense, we identified and systematized them and we highlighted their manifestation forms in training and competition. In our opinion, it is also extremely important to emphasize the functional relationship between different types and forms of communication. We think that the activity efficiency depends on the way of managing the various communication forms within a particular activity. At the same time, it is important to accurately identify the direct communication forms used by each factor involved in the communication process specific to sports activities. The utilization of appropriate communication forms in the training or competition activity ensures, on the one hand, the efficiency in sports skill learning and, on the other hand, the efficiency in competition.

Keywords: direct communication, sports activities, specific forms of communication

* George Dina. Tel.: +40-074-1042610
E-mail address: george.dina@gmail.com
The Dynamics of Effort in the Preparation Process of
Children in Male Artistic Gymnastics

Popa Lucian / phd. Lect./Univ. “Aurel Vlaicu” / Arad
Hidi Iozsef Laszlo/phd. Assistant prof./ UNEFS/Bucuresti

Abstract

The training of children is of paramount importance in their becoming great performers. Increasing the efficiency of this process is directly related to the constant current trends in this sport field.

The study was focused on deepening knowledge about specific effort by probing the complex dynamics of its indicators for the men’s gymnastics workout.

Were determined fourteen specific indicators of dynamics overall effort and in the exercise on apparatuses - the number of workouts per week, training time, the number of weeks of preparation in a year, this volume workouts, injury volume periods for all workshops, total nonspecific preparation time, number of competitions, total training volume, total number of elements in a training run, total number of attempts per apparatus, total number of elements made from one attempt, total training breaks, effective workout time.

Accurate monitoring and reporting of these indicators at the level of high performance allow us exact density analysis effort at this age, the precise scheduling of the process of preparation and effort orientation towards high-performance model.

It creates the opportunity to reduce the rate of early abandonment in male artistic gymnastics performance and optimize the success rate of creating a competitive team at the age of seniority.

Keywords: effort dynamics; children; gymnastics
INDEXES OF AEROBIC CAPACITY AND REPEATED SPRINT ABILITY OF ICE-HOCKEY PLAYERS

Arkadiusz Stanula\textsuperscript{a}, Robert Rocznio\textsuperscript{a}, Krzysztof Kozłowski\textsuperscript{a}, Tomasz Rutkowski\textsuperscript{a}

\textsuperscript{a} The Jerzy Kukuczka Academy of Physical Education, Mikołowska 72a Katowice 40-065, Poland

* Corresponding address: Department of Methodology, Statistics and Computer Science
The Jerzy Kukuczka Academy of Physical Education, 40-065 Katowice, Mikołowska72a
Tel./fax: 0048 32 207 5475 or mobile 00504 124 470
e-mail: a.stanula@awf.katowice.pl

Abstract

The primary objective of this study was to determine a relationship between aerobic capacity (\(\text{VO}_2\text{max}\)) and fatigue from high-intensity skating in male hockey players. The subjects were twenty-four male members of the national ice hockey under twenty (U-20) team of Poland who played the position of forward or defence. Each subject completed an on-ice Repeated-Skate Sprint test (RSS) consisting of 6 timed 89-m sprints, with 30 s of rest between subsequent efforts, and an incremental test on a cycle ergometer in the laboratory, the aim of which was to establish their maximal oxygen uptake (\(\text{VO}_2\text{max}\)). The analysis of variance showed that each next repetition in the 6x89 m test was significantly longer than the previous one (\(F_{5,138}=82.52, p<0.001\)). An analysis of the fatigue index (FI) calculated from the times recorded for subsequent repetitions showed that the value of the FI increased with subsequent repetitions, reaching its maximum between repetitions 2 and 3 (4.00±0.88%). The total FI was 15.82±1.32%. The coefficient of correlation between \(\text{VO}_2\text{max}\) and the total FI for 6 sprints on the distance of 89 m (\(r =-0.562\)) was significant (\(p=0.004\)). The variance in the index of players’ fatigue in the 6x89 m test accounted for 32% of the variance in \(\text{VO}_2\text{max}\). The 6x89 m test proposed in this study offers a high test-retest correlation coefficient (\(r=0.78\)).

Keywords: aerobic capacity; anaerobic capacity; intermittent exercise; ice-hockey
Relevance Level of the Means of Training Regarding Performance in Orienteering Competitions

Veronica Minoiu,
Phd Lecturer, Faculty of Physical Education and Sport, University of Craiova, 156, Brestei Street, Craiova, 200207, Romania

Abstract

This paper deals with the relevance level of various means of training, including some less agreeable to sportsmen regarding performance in orienteering competitions, specifically long and middle-distance competitions. In order to test the modality in which the analyzed variables interact with each other, in the first stage, the correlation method was applied. We opted for the simple linear correlation coefficient of Pearson (r). For the combination of independent variables, coupled with dependent variables, a graphical analysis was performed, continued with the regression method that consisted in the construction of some linear models for each of the two dependent variables (speed of completing the test distance), in combination with the group of independent variables and a free time limit. All models were tested in terms of validity, analyzing the variation (ANOVA) by means of F test and, as a result, we are dealing with valid models.

Key words: Performance in orienteering; relevance means; regression;
Abstract

The difference between success and failure in team sports is usually given by the way in which the team solves its tasks in both training and competition. In the handball team, solving a problem or achieving a task involves the choice of a solution among the many ones proposed, but also discussions, divergent points of view, therefore interaction. An issue of great interest raised by the group task solving is how the roles are assigned in relation with the task. Each role appears as an association of individual and collective elements that confer quality to the role, by ensuring the individual’s unique adaptation. In our study, we started from the necessity of “mapping” the roles assumed by each member of the handball team and, subsequently, by implementing an intervention programme based on the action methods, we expected each player to become aware of those roles and then to harmonize them, the final goal being a coherent and cohesive team functioning.

Keywords: team; handball; roles; cohesion; performance.