

Original Article

Contributions to developing the balance ability to players handball performance specializing as a goalkeeper

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Abstract

Training Handball player performance requires, in addition to the training program conducted with all components of the team and a series of workouts individualized, focused on the improvement of techniques and activities specific tactical position game, under specific effort and structure of driving handball current. In this regard, an experiment was conducted longitudinally on five subjects, members of the representative team handball specialized as a goalkeeper, in order to develop balance, considered essential condition for achieving performance on this post game. Special programs have been designed so as to help improve the performance capacity through the ability to balance, motor skills and coordinative combined. They were built on the skeleton simple plyometric exercises starting positions and landing were performed on small areas of support (standing on one leg, arms in different positions, blindfolded, sitting in low positions etc.).

Key Words: balance capacity, handball, performance, goalkeeper.

Introduction

For the game of handball current performance can not be obtained without the knowledge of the theoretical and practical model of somatic motor and content tactical-technical specific post game that athletes are specialized to shape training in full accordance with the structure of the game and handball specific effort of the current game date. Thus, by linking content tactical-technical structure specific motor goalkeeper position, resulting is complex and diversified systems of quality drivers and drivers of performance or speed of response under skill and specific resistance to the existence of a fund mentally strong stressful. This paper attempts to bring the attention of those in charge of preparing the players specializing as a goalkeeper, training facilities parts psychomotricity centered steady capability, which can be focused into a model of training and evaluation methods their corresponding echelon of high performance handball.

The purpose of research is the experimental investigation on the level of performance and improve it based on specialized programs to specialized players as a goalkeeper in handball elite.

Research objectives, targets multiple aspect including:

- Setting the literature related to the subject matter;
- Develop and framing a training program that aim to improve the ability to balance specializing players as a goalkeeper in handball performance, adapted distinct periods of the racing calendar;
- Experimental investigation on capacity balance observant players specializing as a goalkeeper in handball performance, using the platform of balance;
- Improving capacity balance by applying specialized programs.
- Study ways of maximizing performance capacity at specialized players as a goalkeeper in handball performance;
- Develop and implement specialized programs for improving the ability to balance the players specializing as a goalkeeper in handball performance;
- Evaluation of capacity improved balance in the application of specialized programs to specialized players as a goalkeeper in handball performance;
- Preventing injuries and accidents skilled players as a goalkeeper in handball performance by a correct execution of the technique of playing them and especially how to land and mitigate shock when landing.

Research tasks.

- Based on the objectives established during the investigation were found several tasks including:
- analyzing bibliographic sources of literature and interdisciplinary touch to the subject matter;
 - design professionals on the role and place of balance to maximize performance specialized players as a goalkeeper in handball performance;
 - the development and practical application of specialized programs based on an appropriate methodology to specialized players as a goalkeeper in handball performance.

The research hypothesis.

To the objectives and tasks that had to be met during the research we have formulated three hypotheses, confirming the research purpose, namely:

1. If they use programs specialized work, conceived and adapted to the specific structure of the motor and content of technical and tactical specific post game, and the individual characteristics of players specializing as a goalkeeper in handball performance will improve performance capability which will help maximize and streamline the goalkeeper's contribution to the game's economy.

2. We believe that rethinking and updating player specialized training system as a goalkeeper in handball performance through the use of training resources focused on capacity balance will increase its performance.

Material and methods

The experimental sample consisted of skilled players as a goalkeeper in handball representative echelon teams of the Super League in Romania and France. It is Popescu Mihai Catalin (Sant Raphael - France), Iancu Ionut (CSM Bucharest) Ciobanu Ionut (Steaua Bucharest), Irimus Ionut Andrei (Dinamo Bucharest) and Grigoraş Stefan (Dinamo Bucharest), all components of both the teams leading from French and Romanian handball participating in the European Championships and National team Handball components of Romania. Based on the experimental program we found it necessary to use in our research case study, which lead us to meaningful results that can be sustained in training skilled players as a goalkeeper in handball performance.

The criteria for choosing subjects in the experimental sample were:

- Have an activity in the upper echelon of performance handball least 6 years;
- Participate rhythmic and continuous process of training and competitions;
- Be interested for inclusion in the training program means that we proposed to improve capacity performance of the players specializing as a goalkeeper in handball performance;
- To participate in a disciplined and deliberate process proposed by the individualized workout coach.

Venue of experimental investigations.

The experimental program was performed under the training of club teams they belong squad of new investigations tackled and Laboratory Research Center for Human Performance at the Faculty of Physical Education and Sport, University of Pitesti.

The experimental methodology.

When striving investigation it was determined that, to be based on the case study in a longitudinal experiment. This measure was taken because there is at sea level performance in male handball in our country and a representative number large enough to implement specialized programs for improving the ability to balance the players specializing as a goalkeeper. As such, we considered necessary to realize an experiment on longitudinal case study, under and by its own methodology. Under this methodology we considered necessary that the beginning of our scientific approach to find and evaluate which is the ability to balance the five representatives in the Romanian handball goalkeepers but also in the international one.

This preliminary scientific approach was necessary in order to obtain real data on the performance capability of the subjects investigated, and how they use in the process of driving structures individualized workout that helps optimize athletic performance.

The structure and content of specialized programs

Contribution and originality personal on the structure and content of specialized programs to improve balance in the planning of sports training is the basics that were made in the pedagogical experiment, applied as experimental investigations on the case study at players specializing as a goalkeeper in handball of performance.

Personal experience gained as a sportsman specializes as a goalkeeper in handball performance, led to the scheduling and planning through specific, standardized to improve the capacity steady using drive systems, streamlined specialized programs that have on their well-defined objectives to be implemented handball players specializing as a goalkeeper. The structure and content of the programs that contribute to improving the ability to balance the handball players specializing as a goalkeeper were made based on documentation quality materials and informative content handball players in training, used in handball national and international performance.

Programs for improving ability to balance the handball players specializing in the goalkeeper position is important and efficient means considerably in the course handball sports performance training for skilled players as a goalkeeper and beyond.

The structure of programs to improve the ability to balance the handball players specializing as a goalkeeper.

The composition of specialized programs consisting predominantly of exercises to improve balance, designed the technical and tactical gestures of handball goalkeeper had considered several categories including:

- Programs gestures with specific technical and tactical movements goalie phases of defense and attack in their own half of the field in front of their own goal;
- Plyometric programs containing static balance exercises;
- Plyometric programs containing dynamic balance exercises;

- Training programs with job specific means of action game made individually or in collaboration with field players.

Content improvement programs to balance the handball players specializing as a goalkeeper in handball performance.

- Establishing the content on the operational objectives designed to improve balance in accordance with the driving action of handball goalkeeper.

- Establishment of simple and complex drive systems based on static or dynamic balance ability handball goalkeeper.

- Establishing the content preparedness plans depending on the age and performance targets of each of the research subjects.

- Planning and programming means to improve balance at key stages of training for good efficiency.

- Establishing drives the combine exercises to improve balance structures specific technical and tactical handball current.

Dosage exercises to improve balance ability in mind:

- Exercises used in the conduct of the game keeper's defense team

- Exercises used in operations goalkeeper in the game of attack team (the latest regulation changes regarding player participation and replacing specialized as a goalkeeper in the attack phase of the team).

Systematizing content models of specialized programs implemented under experimental investigations.

Content of programs to improve the capacity balance has been achieved based on a rich documentation on the quality and novelty informative materials on training in handball performance in Romania and other countries in which it is developed this sports game. We believe that the use of specialized programs to improve the capacity of balance from the structure plyometric, are an accumulation not only the quality but also a training multipurpose they need players specializing as a goalkeeper in handball performance, knowing that that efficiency goalkeeper in handball on the efficiency of the whole team.

As for the means chosen were included in specialized programs selected and systematized branch origin and proof sports and muscle after training methods that contribute to improving the capacity of balance.

In this regard were taken in gymnastics means, means from other team sports and plyometric means. Plyometric means have been used as a method to improve the explosive force at a high level, and thus to improve the capacity and dynamic balance, in particular. The funds taken from gymnastics were used for improving balance both static and dynamic balance. Dosing means used in specialized programs was conducted taking into account both the individual characteristics of the subjects chosen by us as experimental sample and the complexity of the movements. Also it was carried out and depending on the technical and tactical methods used by specialized skill as a goalkeeper in the game of handball. Dosage specialized programs was also conducted according to the period of preparation of sports training and operational objectives and performance. In this regard was issued annual training plan used in the experimental investigations.

Special programs for improving the ability of static equilibrium - modeled on the means taken from gymnastics, with influence on the general physical preparation.

Operational objective: improving the ability to balance by keeping the body in different positions and small areas of support. Keeping in standing on one leg, arms lateral, oblique back before.

Body segments required	Number of training	Specialized program for improving the balance capacity isometric effort	Application and muscle photographic representation
- legs - trunk	12 training	9" isometrics 2" restoration exercise capacity 3 sets x 5 reps 10" isometrics 2" restoration exercise capacity 3 sets x 5 reps 12" isometrics 2" restoration exercise capacity 3 sets x 6 reps	- uses for the legs muscles triple extension. - uses muscles m. deltoid - uses back muscles

Technical description: sitting on top of a foot, hand held different positions (forward, backward, sideways). Methodic: body lifting on the vertical edge; year run with the normal breathing after a prolonged apnea; arms and leg raised, taut; look forward.

Operational objective: improving spatial orientation, coordination of movement and precision in execution.

- elastic net vertical jumps; improving the ability to balance and coordination body in the air; improve orientation in space and precision in execution.

Body segments required	Number of training	Specialized program for improving the balance capacity isometric effort	Application and muscle photographic representation
- legs - trunk	12 training	4 series x 20 jumps body lying 3 sets x 20 square jumping body 4 series x 20 jumps with legs bent at chest break 10 "from series	-Prompts m. triceps femoral -Prompts m. big buttock -Prompts m. latissimus dorsi -Prompts m. grand trapeze -Prompts m. twins -Prompts m. soleus

Technical description: Starting position: sitting with arms before the elastic net. Technical implementation: jumping vertically stretched body with square body with knees to chest.

Methodic: during the jump look forward; increased muscle tone and body is controlled; jumping is running from carrying arms back forward; jumping runs accompanied by normal breathing movements. Operational objective: improving capacity in terms of effort isotonic balance.

Body segments required	Number of training	Specialized program for improving the balance capacity isometric effort	Application and muscle photographic representation
- legs	12 training	7 Jumping on the left leg x 4 series break 5 seconds break between series	uses triple extension muscles (m. big buttock m. triceps femoris, m. soleus, m. twins, m. flexor thalamus)
- trunk		7 Jumping on the right leg x 4 series break 5 seconds break between series	

Technical description: seven jumping scale runs from stage to stage on one leg; 7 jumping on other foot break 5 "between jumping on one leg.

Methodic: jumping run alternately on the right foot, then left foot on top of the peak; During the jump palms to the hips; jumping movements with extensive runs deep inspiration breath during flight, forced expiratory time of landing.

Objective: improve the capacity of balance and general coordination effort.

Body segments required	Number of training	Specialized program for improving the balance capacity isometric effort	Application and muscle photographic representation
- legs	12 training	7 jumping 30 cm diameter circle on the right foot, keeping six seconds on foot x 4 series, 7secunde break between series	- m. twins, m. triceps femoris, m. flexor and extensor thalamus, lig. knee lig. Akilian - m. paraspinal m. m. dorsal, m. notched the chest
- trunk		7 jumping 30 cm diameter circle on the left foot, keeping six seconds on foot x 4 series, 7secunde break between series	

Technical description: jumping seven runs in a circle placed at 50 cm distance from each other, alternating right leg and left leg. Methodic: during jumping arms go back before; running jumping from one foot to the other; jumping movements are accompanied with ample breathing.

Conclusions

To achieve accumulation leading to qualitative leaps, in addition to exercises with the whole team, players specializing as a goalkeeper must participate in training strictly individual, as stated in the technical and tactical specific post game and structure specific motor.

Drives through which he exercises develop technical elements and those focused on developing the capacity of equilibrium must have similar structures with as many game situations, to ensure similarity to sequences and rally, to be consistent with the structure of the motor and post game specific effort, skill training to implementing bilateral game to a higher level of efficiency. Drives proposed and tested in practice that focused on education / development capacity steady proved opportune selected, applied and dispensed through transfers positive on the results from control samples, but especially by developments superior research subjects in official games played for club teams and national handball team of Romania.

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