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RESEARCH ARTICLE

Developing Jump Endurance in Handball Players Through Situational Exercises to Improve the Effectiveness of Jumping Activity

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Abstract

Jumping ability plays a crucial role in handball performance, especially in offensive and defensive actions such as jump shots, blocking, and rapid changes of movement. One of the key components of this ability is jump endurance, which allows players to perform repeated jumps effectively during the entire match. The purpose of this study is to analyze the effectiveness of situational exercises in developing jump endurance among handball players. The article discusses theoretical aspects of jumping activity, the physiological and biomechanical foundations of jump endurance, and the role of situational training exercises in improving the effectiveness of jumping performance in handball. The results indicate that the integration of situational drills with plyometric and endurance exercises contributes significantly to improving players' jumping capacity and overall game performance.

KEYWORDS

Handball, jump endurance, situational exercises, jumping ability, sports training, plyometric training.

INTRODUCTION

Handball is a dynamic team sport that requires high levels of speed, strength, coordination, and endurance. One of the most important physical qualities for handball players is jumping ability. During a match, players repeatedly perform jumps for shooting, blocking, and intercepting the ball. Therefore, the development of jump endurance is essential for maintaining performance throughout the game.

Jump endurance refers to the ability of an athlete to perform repeated jumps with minimal decline in power and technique. In handball, players often perform dozens of jumps during a single match. If jump endurance is insufficient, the quality of jumps decreases, which negatively affects both offensive and defensive effectiveness.

Modern sports training increasingly emphasizes situational exercises that simulate real game conditions. Such exercises allow athletes to develop not only physical qualities but also tactical thinking and coordination. Therefore, situational exercises are considered an effective method for improving jump endurance and overall performance in handball players.

The aim of this article is to study the role of situational exercises in developing jump endurance and improving the

effectiveness of jumping activities among handball players.

The Importance of Jumping Activity in Handball

Jumping actions are fundamental elements of handball performance. Players frequently perform vertical and horizontal jumps during offensive and defensive actions. For example, jump shots are widely used by attacking players to shoot over defenders. Defensive players also rely on jumping ability when blocking shots or intercepting passes.

Research shows that the effectiveness of many technical elements in handball directly depends on jumping ability. Players with higher vertical jump capacity and better jump endurance can perform more successful offensive actions.

The following game situations require well-developed jumping ability:

- jump shots from the backcourt
- wing jump shots
- blocking opponents' shots
- intercepting high passes
- defensive jumping movements

Since these actions occur repeatedly during a match, players must maintain a high level of jump endurance.

Physiological and Biomechanical Basis of Jump Endurance

Jump endurance is influenced by several physiological factors, including muscular strength, explosive power, and aerobic capacity. The primary muscles involved in jumping include the quadriceps, hamstrings, gluteal muscles, and calf muscles.

From a biomechanical perspective, effective jumping requires optimal coordination between the lower limbs and the trunk. Proper technique helps athletes generate maximum force during take-off while maintaining balance during landing.

Muscle fatigue is one of the main factors that reduce jump performance during prolonged matches. When fatigue accumulates, the height and power of jumps gradually decrease. Therefore, training programs must focus on improving both strength and endurance of the muscles involved in jumping.

Plyometric training is commonly used to improve explosive strength and jump endurance. Such exercises include jump squats, box jumps, and bounding drills.

Situational Exercises in Handball Training

Situational exercises are training activities that simulate real game situations. These exercises allow players to practice technical and tactical skills under conditions similar to those experienced during actual competition.

Situational exercises in handball training may include:

- attacking drills with jump shots
- defensive blocking exercises
- fast-break finishing with jumps
- small-sided games with jumping actions

These exercises help players improve their physical conditioning while simultaneously developing decision-making skills.

For example, a situational drill may involve two attacking players and two defenders. The attackers must perform jump shots while defenders attempt to block them. This exercise combines jumping activity with tactical awareness.

Methods for Developing Jump Endurance

Several training methods can be used to improve jump endurance in handball players. These include:

Plyometric training

Plyometric exercises focus on explosive movements that develop power and elasticity of muscles. Examples include:

- box jumps
- depth jumps
- jump lunges

Circuit training

Circuit training combines different exercises performed consecutively with minimal rest. This method helps improve both strength and endurance.

Game-based training

Small-sided games are effective for developing jump endurance because they simulate match intensity.

Interval training

Interval training alternates periods of intense activity with short recovery intervals. This method helps players maintain performance during repeated jumps.

Practical Application of Situational Exercises

The integration of situational exercises into handball training programs can significantly improve jump endurance. Coaches should design drills that combine jumping actions with tactical tasks.

For example:

Exercise 1 – Repeated Jump Shots

Players perform consecutive jump shots from different positions on the court.

Exercise 2 – Defensive Blocking Drill

Two defenders repeatedly jump to block shots from attacking players.

Exercise 3 – Fast Break Jump Finish

Players sprint toward the goal and finish the attack with a jump shot.

These exercises develop both physical endurance and technical skills.

DISCUSSION

The results of various training studies indicate that situational exercises are highly effective in improving jump endurance. Unlike isolated strength exercises, situational drills provide a more realistic training environment.

Athletes trained with situational exercises demonstrate better coordination, faster decision-making, and improved jumping performance during matches.

Moreover, situational training increases players' motivation because exercises resemble real game scenarios.

CONCLUSION

Jump endurance is a key factor in the effectiveness of handball players' performance. The ability to perform repeated jumps with high intensity significantly influences both offensive and defensive actions.

Situational exercises provide an effective training method for developing jump endurance because they simulate real game conditions. The integration of plyometric training, circuit training, and game-based drills helps improve jumping ability and overall physical performance.

Therefore, coaches should incorporate situational exercises into training programs to enhance the jumping endurance of handball players and increase their competitive performance.

REFERENCES

1. Bompa T. Theory and Methodology of Training. Human Kinetics, 2015.
2. Platonov V. Sports Training Theory. Kiev, 2013.
3. Zatsiorsky V. Science and Practice of Strength Training. Human Kinetics, 2006.
4. Bartlett R. Introduction to Sports Biomechanics. Routledge, 2014.
5. Schmidt R. Motor Learning and Performance. Human Kinetics, 2011.
6. Hoffmann P. Handball Training Methods. Meyer & Meyer Sport, 2010.