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ASSESSMENT OF GENERAL AND SPECIAL PHYSICAL PREPARATION OF ATHLETES SPECIALIZING IN FIELD HOCKEY

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Abstract

This article examines the issues of assessing the level of general physical preparation (GPP) and special physical preparation (SPP) of athletes specializing in field hockey. The study aims to develop testing criteria for determining the physical condition of athletes and analyzing their effectiveness in competitive activities. The correlation between indicators of endurance, speed, flexibility, and specific technical skills is explored. The results obtained serve to optimize the planning of the educational and training process.

Keywords: Field hockey, general physical preparation, special physical preparation, testing, sports performance, monitoring.

Introduction

Modern field hockey is characterized by its high dynamics, the necessity for rapid decision-making, and intensive movements throughout the game. The effectiveness of athletes during competitive activities directly depends on their levels of general physical preparation (GPP) and special physical preparation (SPP). While GPP creates the foundation for the comprehensive development of the athlete's body and basic endurance, SPP is essential for executing game

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techniques, performing high-speed maneuvers with the stick, and demonstrating explosive speed.

To address the research objectives, studies were conducted on 40 young field hockey specialists (aged 17-18) with qualifications ranging from 1st-category athletes to candidates for Master of Sports (CMS). The tests used to determine and assess their level of physical and technical preparation included previously developed and validated control exercises.

Materials and Methods

The level of **General Physical Preparation (GPP)** was determined using the following tests:

- 30m sprint, 100m sprint.
- Triple jump, standing long jump.
- 100x4m shuttle run, 1000m and 2000m runs.
- Vertical jump and hand dynamometry (to determine grip strength).

The level of **Special Physical Preparation (SPP)** was assessed based on:

- 100x4s shuttle run.
- Backwards medicine ball throw (3 kg).
- Long-distance ball flick/hit with the stick.
- Goal shooting from a 7m distance.
- Dribbling frequency within 1 minute.
- 30m zigzag run with the ball.

Technical preparation was evaluated through control tests including:

1. 30m run maneuvering around obstacles.
2. Dribbling around obstacles followed by a shot on goal.
3. Passing while maneuvering around obstacles.
4. Shooting accuracy and range.
5. Time to strike and accuracy of goal shots.

Data processing, correlation, and statistical analysis were performed using specialized statistical software packages.

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Literature Review:

According to V.M. Kostyukevich, considering the coordination complexity of technical-tactical actions (TTA), it is necessary to account not only for the execution methods of game techniques but also for their biomechanical structures and kinematic characteristics. TTA indicators include ball stopping, passing, striking, tackling, and shooting. To execute these methods, hockey players must be physically well-developed and possess high functional capabilities, as their roles on the field place specific demands on the development of physical qualities.

Research Methodology:

Speed qualities were assessed using track and field tests (30m and 100m sprints). Endurance was evaluated based on 1000m and 2000m run results. Speed-strength qualities were measured via jumping and long jump tests, while coordination was assessed through the triple jump. Following the implementation of an experimental program in the experimental group (EG), an increase in all studied physical qualities was recorded ($P < 0.05$).

A significant increase in the EG was found in short-distance sprint indicators. However, a notably high improvement of 19.2% was established for the 1000m run, indicating the development of general endurance—a vital quality in hockey. Similar growth in speed-strength qualities was observed in the vertical jump and long jump tests (6.5% and 7.7% respectively). Coordination improved by 6.1% in the EG compared to 5.33% in the Control Group (CG).

Analysis and Results:

At the beginning of the experiment, the CG and EG were verified for homogeneity. Post-study data showed that the CG saw reliable growth in almost all GPP indicators, except for the 100m sprint. Speed qualities (30m and 100m) showed less growth, confirming they are more genetically determined. However, field hockey-specific endurance showed significant improvement: the 1000m run growth was 18.2% in the EG, which is more than double the CG's 8.21%.

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Hand strength increased by 5.35% in the CG and 9.03% in the EG. This confirms that while both groups are in good shape, the quantitative growth in the EG is significantly higher, proving the effectiveness of targeted muscle development using training equipment.

Conclusion and Recommendations

In the control group, growth was present but marginal. Two indicators were noteworthy: long-distance ball hitting and the 30m zigzag dribble. In the EG, all SPP indicators increased significantly. The largest growth was recorded in the 30m zigzag dribble (16.03%). It is noted that midfielders perform dribbling most frequently, while defenders do so the least. Accuracy in goal shooting increased by 12.7%, a task most critical for forwards and attacking midfielders.

Table: Technical preparation indicators of field hockey players (NG/CG vs EG) after the experiment

№	Indicators (X±σ)	CG	EG	Difference (%)	t	P
1	30 m run around obstacles	6.30 \pm 0.22$	4.90 \pm 0.29	22.2	7.2	<0.05
2	Dribbling around obstacles (sec)	8.45 \pm 0.30	7.10 \pm 0.57	15.9	9.37	<0.05
3	Passing around obstacles (sec)	6.40 \pm 0.29	5.60 \pm 0.31	12.5	8.43	<0.05
4	Strike distance (m)	15.05 \pm 3.20	17.90 \pm 1.53	18.9	3.59	<0.05
5	Goal shooting accuracy	13.81 \pm 1.45	16.00 \pm 1.80	15.9	4.24	<0.05

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The results in technical and tactical indicators demonstrate the superior athletic form of the EG players. Their performance levels are approaching those of high-ranking professional players, suggesting a high potential for transitioning to professional leagues.

References

1. Kostyukevich, V.M. (2008). Integral assessment of technical-tactical activity of highly qualified players in field hockey. *Science in Olympic Sports*, (1), 32-41.
2. Godik, M.A., & Shiryaev, A.G. (1974). Canonical correlation method in sports-pedagogical research. Theory and Practice of Physical Culture, (7), 62-64.
3. Bykov, V.A. (2011). Strategy and tactics in team game sports. Scientific Notes of the P.F. Lesgaft University, 44-49.
4. Buraimov, I.B. (2025). Theory and Methodology of Field Hockey: Textbook. Tashkent. pp. 206-210.