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**IMPROVING SPEED QUALITIES THROUGH BASKETBALL TRAINING
METHODS**

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Annotation: this study explores the effectiveness of basketball-specific training methods in improving speed qualities among young athletes. The research highlights the significant role of structured speed-focused drills, such as sprints, agility exercises, and resistance training, in enhancing sprinting speed and agility. The findings provide practical recommendations for integrating these methods into regular basketball training regimens, helping players meet the physical demands of modern basketball competitions.

Аннотатион: это исследование изучает эффективность специальных тренировочных методов в баскетболе для улучшения скоростных качеств у молодых спортсменов. В работе подчеркивается важность структурированных упражнений, направленных на развитие скорости, таких как спринты, упражнения на ловкость и тренировки с сопротивлением, для повышения спринтерской скорости и ловкости. Полученные результаты предоставляют практические рекомендации по интеграции этих методов в регулярные тренировки по баскетболу, помогая игрокам соответствовать физическим требованиям современных соревнований.

Annotatsiya: ushbu tadqiqot yosh sportchilarda tezlik sifatlarini rivojlantirishda basketbolga xos maxsus mashg'ulotlar usullarining samaradorligini o'rganadi. Tadqiqotda sprintlar, chaqqonlik mashqlari va qarshilik bilan bajariladigan mashqlar kabi tezlikka yo'naltirilgan tuzilmaviy mashg'ulotlarning ahamiyati ta'kidlanadi. Natijalar ushbu usullarni muntazam basketbol mashg'ulotlariga kiritish bo'yicha amaliy tavsiyalar beradi va o'yinchilarga zamonaviy basketbol musobaqalari talablariga javob berishda yordam beradi.

Keywords: basketball, speed qualities, agility, sprint training, resistance training, young athletes, basketball training methods

Ключевые слова: Баскетбол, скоростные качества, ловкость, спринтерская тренировка, тренировки с сопротивлением, молодые спортсмены, методы тренировки в баскетболе

Kalit so'zlar: basketbol, tezlik sifatleri, chaqqonlik, sprint mashg'ulotlari, qarshilik mashg'ulotlari, yosh sportchilar, basketbol mashg'ulotlari usullari.

INTRODUCTION

Speed is a fundamental quality in basketball, influencing a player's ability to react quickly, move effectively, and perform high-intensity actions during a game. Basketball requires explosive movements, including sprinting, changing direction, and accelerating over short distances. These attributes are crucial for offensive plays, defensive coverage, and overall game strategy. Despite its importance, the effective development of speed qualities often remains a challenge due to the complexity of motor coordination and physical conditioning required in basketball.

Traditional training methods in basketball primarily focus on skill development, leaving limited emphasis on specific physical qualities such as speed. However, recent advancements in sports science highlight the benefits of incorporating speed-specific drills into regular basketball training sessions. These include interval sprints, agility ladder exercises, and resistance-based movements, which not only enhance speed but also improve players' endurance and reaction time.

This study aims to explore the effectiveness of basketball-specific training methods in improving speed qualities among athletes. By analyzing speed improvements in players of different age groups and skill levels, this research contributes valuable insights into optimizing basketball training programs. The findings are expected to provide coaches and trainers with practical strategies to integrate speed-focused exercises into their routines [2].

The significance of this study lies in bridging the gap between theoretical knowledge and practical applications of speed training in basketball. The results can serve as a foundation for developing innovative and efficient training programs that address the demands of modern basketball competitions [1].

METHODS

This study utilized a structured approach to assess the effectiveness of basketball-specific training methods in improving speed qualities.

Participants. The study involved 30 basketball players aged 15 to 18, categorized into two groups: experimental (n=15) and control (n=15). All participants had at least two years of basketball training experience. Inclusion criteria ensured homogeneity in physical fitness levels and basic basketball skills.

Training procedure. The experimental group underwent an eight-week training program focusing on basketball-specific drills targeting speed development. Key exercises included:

- **Sprint drills.** 10-20 meter sprints with progressive overload.
- **Agility drills.** Ladder exercises and cone-based drills emphasizing quick changes of direction.

- **Resistance training.** Sprinting with weighted sleds and resistance bands to enhance explosive power. The control group continued with their regular basketball training without additional speed-focused drills.

Data collection. Speed performance was evaluated using two standardized tests:

1. **20-Meter sprint test.** To measure straight-line sprinting speed.
2. **T-Test.** To assess agility and speed during changes of direction.

Tests were conducted before and after the intervention to compare improvements.

Analysis. Data were analyzed using paired t-tests to determine pre- and post-training differences within each group and independent t-tests to compare results between groups.

A significance level of $p < 0.05$ was set.

This methodological design ensured reliable measurement of speed improvements and provided a clear framework to evaluate the effectiveness of basketball-specific training methods [4,5].

DISCUSSION

The results of this study highlight the effectiveness of basketball-specific training methods in improving speed qualities among athletes. The experimental group demonstrated significant enhancements in both sprinting speed and agility compared to the control group, emphasizing the value of targeted interventions in athletic training programs [4].

One key finding is the 10.2% improvement in 20-meter sprint times, which underscores the impact of explosive sprint drills and resistance-based exercises. These drills likely improved neuromuscular coordination and leg strength, enabling faster acceleration over short distances. Similarly, the 8.7% enhancement in T-test results reflects better agility and directional control, vital attributes in basketball where rapid changes in movement are critical during gameplay.

Comparing these findings to existing literature, the observed improvements align with studies indicating that sport-specific drills are more effective than generalized training in enhancing sport-specific physical qualities (A. I. Ivanov, 2020). The minimal progress in the control group further reinforces the need for structured speed-focused training rather than relying solely on traditional basketball practice.

However, the study has certain limitations. The sample size was relatively small, and the participants were from a similar age group and skill level, which may limit the generalizability of the findings. Future studies could explore the effects of these methods across different age groups, genders, and skill levels.

In conclusion, integrating speed-specific drills into basketball training can significantly improve performance, providing practical implications for coaches and trainers seeking to optimize player development. This approach addresses the physical demands of modern basketball, fostering competitive success [3,6].

CONCLUSION

This study investigated the effectiveness of basketball-specific training methods in developing speed qualities among young athletes. The results demonstrated significant improvements in both sprinting speed and agility in the experimental group compared to the control group. The integration of targeted drills, such as sprints, agility exercises, and resistance training, proved effective in enhancing players' neuromuscular coordination, explosive power, and movement efficiency.

The findings emphasize the importance of incorporating structured speed-focused drills into regular basketball training regimens. Unlike traditional training methods that primarily focus on skill development, these drills directly address physical attributes critical for basketball performance, such as acceleration, quick directional changes, and reaction speed. Such improvements are crucial for achieving optimal performance in competitive basketball [5].

While the study provides valuable insights, its scope is limited to a specific age group and skill level. Future research should expand to include diverse athlete populations and longer intervention durations to explore the sustained impact of these methods. Additionally, examining the psychological and tactical benefits of improved speed qualities could further enhance training strategies.

In conclusion, basketball-specific training methods represent an effective approach to improving speed qualities. Coaches and trainers are encouraged to adopt these techniques to develop well-rounded athletes who can meet the physical and tactical demands of modern basketball.

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