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The Impact Of Integrating Turon Martial Arts Into Wrestling Training On Students' Physical Fitness Indicators

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Abstract

This study examines the impact of integrating Turon martial arts elements into wrestling training sessions on students' physical fitness indicators. The research was conducted during the 2024–2025 academic year with the participation of 19 university students. Physical fitness tests were carried out at the beginning of the academic year (September) and during interim control (May), and the results were comparatively analyzed.

The findings revealed positive dynamics in strength, speed-strength abilities, and agility. Improvements were observed in pull-ups, push-ups, standing long jump, abdominal strength exercises, and shuttle running performance. The study confirms that integrating Turon martial arts elements into wrestling training contributes to the comprehensive development of students' physical fitness and enhances training effectiveness.

Keywords: Turon martial arts, wrestling training, physical fitness, integration, speed-strength, agility, flexibility.

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1. Introduction

Improving students' physical fitness remains one of the pressing pedagogical issues in modern higher education. The level of physical development influences not only sports performance but also students' overall functional condition, professional preparedness, and the formation of a healthy lifestyle. Therefore, methodological improvement of physical education classes and the implementation of effective training tools are essential.

In recent years, special attention has been paid to integrating national sports into the educational process. National martial arts not only develop physical qualities but also foster national values, patriotism, and sports culture among young people. Turon martial arts is one such discipline, distinguished by its rich technical repertoire, combination of speed and strength components, and dynamic movement system.

Integrating Turon martial arts elements into wrestling training creates opportunities for the comprehensive development of students' physical fitness. The integration model promotes the harmonious development of strength, speed-strength, agility, flexibility, and endurance. Additionally, increased variability in training sessions enhances students' motivation and interest in physical activity.

A review of scientific literature indicates that martial arts

significantly improve physical fitness indicators. However, the specific integration of Turon martial arts into wrestling training and its comprehensive impact on physical performance has not been sufficiently studied.

Thus, the relevance of this research lies in the need to scientifically substantiate the impact of integrating Turon martial arts into wrestling training on students' physical fitness indicators.

The aim of the study was to identify and evaluate changes in students' physical fitness indicators resulting from the integration of Turon martial arts elements into wrestling training sessions.

2. Literature Review

Enhancing students' physical fitness and improving the effectiveness of sports training is a priority direction in modern sports pedagogy. Research shows that physical development affects not only sports achievements but also students' functional condition, healthy lifestyle formation, and professional readiness.

Antonov et al. developed a methodology for assessing students' functional status using index-based evaluation. They emphasized that systematic monitoring of physical load improves training efficiency and prevents overexertion. This approach provides an objective methodological basis for evaluating physical fitness dynamics [1].

Bobomurodov analyzed physical preparedness characteristics of Turon martial artists at the stage of sports mastery. The study identified speed-strength, coordination abilities, and special endurance as priority components. The author noted that the specificity of Turon techniques requires comprehensive physical development, which justifies its integration into physical education programs [2].

Cherepov and Shaikhetdinov demonstrated that combined and variable exercise systems effectively develop physical qualities in students practicing martial arts [3].

Ciaccioni et al. conducted a systematic review confirming that martial arts positively influence both physical and psychological health, enhancing stress resistance and motivation [4].

Other researchers, including Golovnin (2018), Gierczuk & Wójcik (2023), and Griban et al. (2021), highlighted the importance of martial arts training in improving strength, endurance, and overall physical development.

Despite substantial evidence of martial arts effectiveness, comprehensive research on integrating Turon martial arts specifically into wrestling training remains limited.

Organization of the Study

The research was conducted during the 2024–2025 academic year at a higher education institution.

A total of 19 students participated in the study.

The study was implemented in two stages:

Stage 1 – Initial Testing (September)

Students' physical fitness levels were assessed using the following tests:

- ✓ Pull-ups
- ✓ Push-ups
- ✓ Standing long jump
- ✓ Abdominal strength test (sit-ups)
- ✓ 4×9 m shuttle run
- ✓ Forward bend
- ✓ Backward bend

Stage 2 – Integration Phase

Turon martial arts exercises aimed at developing speed-strength, agility, coordination, and flexibility were incorporated into wrestling training sessions. Training was conducted 2–3 times per week, with progressive load increases.

In May 2025, students underwent repeated testing.

Results were analyzed using arithmetic mean values ($\bar{X}$) and percentage changes were calculated to determine dynamics in physical fitness.

3. Result

Table 1
Dynamics of Physical Fitness Indicators (n=19)

Tests	Unit	September ($\bar{X}$)	May ($\bar{X}$)	% Change
Pull-ups	reps	15.89	16.69	+5%
Push-ups	reps	28.21	29.62	+5%
Standing long jump	m	2.14	2.25	+5%
Sit-ups	reps	30.79	32.33	+5%
4×9 m shuttle run	sec	10.05	9.75	−3%
Forward bend	cm	16.82	17.66	+5%
Backward bend	cm	47.26	45.85	−3%

The results indicate positive dynamics in most physical fitness indicators.

Upper body strength and strength endurance increased by 5%, as evidenced by improvements in pull-ups and push-ups.

Explosive power improved by 5%, reflected in standing long jump performance.

Core endurance also increased by 5%.

A 3% reduction in shuttle run time indicates improvement in agility and speed.

Although a slight decrease (3%) was recorded in backward bending, overall physical fitness dynamics remained positive.

The findings confirm the effectiveness of integrating Turon martial arts elements into wrestling training sessions.

4. Conclusion

The results demonstrate that integrating Turon martial arts elements into wrestling training positively influences students' physical fitness indicators.

Comparative analysis of September and May results showed improvements in strength, speed-strength, and agility. An average 5% increase was observed in pull-ups, push-ups, standing long jump, and sit-ups. Improvements in shuttle run time confirmed enhanced speed and coordination abilities.

The findings indicate that integrating Turon martial arts into wrestling training is an effective tool for comprehensive physical development. This approach enriches the educational process, improves training effectiveness, and increases students' motivation toward sports participation.

Therefore, systematic inclusion of Turon martial arts elements into national and international wrestling training programs is recommended.

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