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PHYSICAL CONDITION PROFILE OF WUSHU ATHLETES AT GMP WUSHU CENTER, EAST OKU

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Physical condition, Wushu, Strength, Speed, Endurance, Agility

Abstract
This study aimed to describe the physical condition profile of Wushu athletes at GMP Wushu Center, East OKU. A quantitative descriptive survey design was used. The population consisted of all active Wushu athletes at the center, and eight athletes aged 14-20 years were selected using purposive sampling. The research instruments were a push-up test for upper-body strength, a 30-m sprint test for speed, a bleep test for cardiovascular endurance, and a figure-8 shuttle run test for agility. Data were analyzed using descriptive statistics through mean scores, percentages, and fitness categories. The results showed that the athletes' physical condition was generally in the good category. The mean strength score was 34 push-up repetitions, the mean 30-m sprint time was 4.26 seconds, the mean endurance score was 9.95 on the bleep test, and the mean agility time was 11.36 seconds. These findings indicate that the physical profile of GMP Wushu Center athletes is adequate to support training demands, although endurance development remains necessary for several athletes to achieve more optimal performance.

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INTRODUCTION

Physical condition is a central foundation of athletic performance because it determines how well athletes can execute technical and tactical actions under training and competition demands. In martial arts, physical readiness is closely related to the ability to produce force, move quickly, sustain effort, and change direction efficiently. Wushu, especially the sanda discipline, requires repeated explosive actions such as punching, kicking, dodging, advancing, retreating, and counterattacking; therefore, athletes need adequate strength, speed, endurance, and agility to maintain performance throughout practice and competition.

Wushu is a martial art originating from China and has developed as a competitive sport with taolu and sanda as the main categories. Sanda emphasizes practical combat actions and requires athletes to combine technical mastery with high physical capacity. In this context, a training program cannot rely only on technical

repetition. Coaches also need objective information about athletes' physical components so that the training load, exercise selection, and performance targets can be adjusted to real athlete needs.

Previous studies have reported that physical-condition evaluation is useful for identifying strengths and weaknesses in Wushu athletes. Research on Wushu athletes in other regions showed variation across components such as arm strength, sprint speed, agility, balance, and endurance. These findings suggest that each training center may have a specific physical profile depending on athlete age, training history, facilities, and coaching program. However, no systematic data were available on the physical condition of athletes at GMP Wushu Center, East OKU. This gap limits the ability of coaches to evaluate training outcomes and design evidence-based conditioning programs.

The novelty of this study lies in providing a local, component-based physical profile of Wushu athletes at GMP Wushu Center, East OKU, using direct field tests that are practical for coaches. The objective of this study was to determine the physical condition profile of these athletes in terms of strength, speed, endurance, and agility. The results are expected to serve as baseline data for training evaluation, athlete monitoring, and future conditioning program development.

METHOD

This study used a quantitative descriptive design with a survey method. The research was conducted at GMP Wushu Center, East OKU, in June 2026. The design was selected to obtain an objective description of the athletes' physical condition based on direct measurement in the training environment.

The population consisted of all active athletes registered at GMP Wushu Center, East OKU. The sample included eight athletes aged 14-20 years who actively participated in the training program. Purposive sampling was used because participants had to be active Wushu athletes within the specified age range. Since the population was small, all eligible athletes were included as research participants.

The instruments consisted of four field tests: push-up test to measure upper-body muscular strength, 30-m sprint test to measure speed, bleep test to measure cardiovascular endurance, and figure-8 shuttle run test to measure agility. Before testing, participants received an explanation of procedures and performed a warm-up for approximately 10 minutes. Data collection was conducted in two meetings. The first meeting covered strength and agility tests, while the second meeting covered endurance and speed tests. All scores were recorded on prepared observation sheets.

Data were analyzed using descriptive statistics. The analysis included calculating individual scores, mean values, and categorical interpretation based on

fitness norms used in the study. The results were then presented in tables and a figure to describe the overall physical condition profile of the athletes.

RESULTS

The participants were eight active Wushu sanda athletes aged 14-20 years. The individual test results are presented in Table 1.

Table 1.
Individual Physical Condition Test Results

No	Code	Age	Strength (rep)	Category	Speed (sec)	Category	Endurance (level)	Category
1	Gi	17	35	Baik	4.32	Baik	10.1	Baik
2	Al	19	38	Baik	4.08	Baik	10.7	Baik
3	No	17	32	Baik	4.42	Sedang	10.1	Baik
4	Wi	20	40	Baik Sekali	3.90	Baik Sekali	11.5	Baik Sekali
5	An	14	24	Sedang	4.80	Sedang	7.4	Kurang
6	Ah	14	26	Sedang	4.65	Sedang	7.6	Kurang
7	Gu	19	36	Baik	4.02	Baik	10.6	Baik
8	Da	20	41	Baik Sekali	3.85	Baik Sekali	11.6	Baik Sekali

Table 1 shows that strength, speed, and endurance varied across athletes. Several athletes reached very good scores in strength, speed, and endurance, while two athletes still showed lower endurance levels.

Table 2.
Agility Test Results

No	Code	Figure-8 Shuttle Run (sec)	Category
1	Gi	11.3	Baik
2	Al	10.9	Baik
3	No	11.8	Sedang
4	Wi	10.1	Baik Sekali
5	An	12.6	Kurang
6	Ah	12.8	Kurang
7	Gu	10.2	Baik Sekali
8	Da	11.2	Baik

Table 2 indicates that agility was generally good. Two athletes were classified as very good, four athletes as good or moderate, and two athletes as low, indicating a need for more specific change-of-direction training.

Table 3.
Summary of Mean Physical Condition Scores

Component	Test	Mean	Overall Category
Strength	Push-up	34 repetitions	Good
Speed	30-m sprint	4.26 seconds	Good
Endurance	Bleep test	9.95 level	Moderate to good
Agility	Figure-8 shuttle run	11.36 seconds	Good

The mean results in Table 3 show that the athletes had an overall good physical condition profile. Strength, speed, and agility were in the good category, while

endurance was moderate to good and became the main component requiring further improvement.

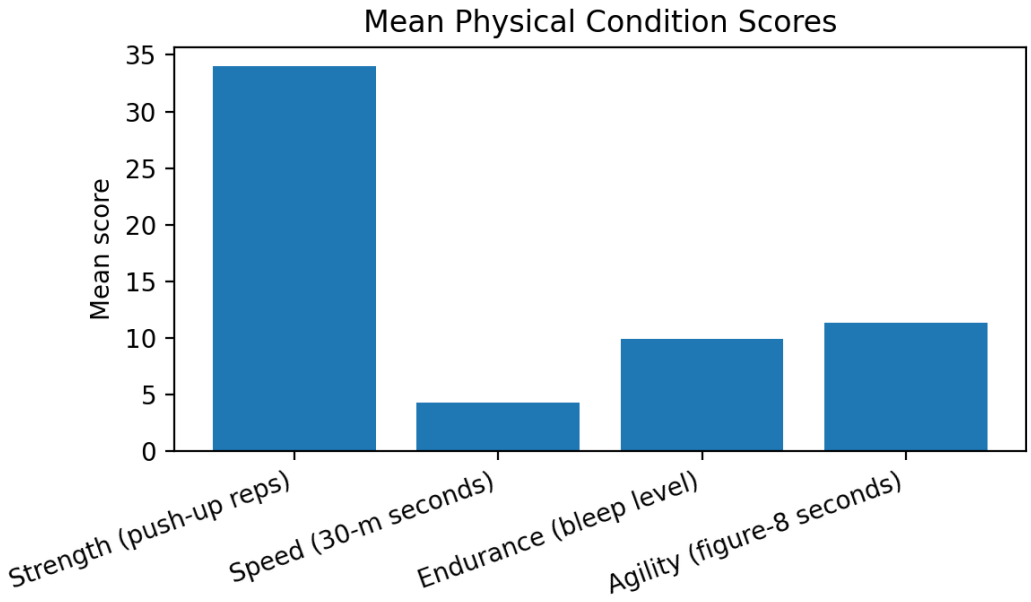

Figure 1.
Mean Physical Condition Scores of Wushu Athletes

DISCUSSION

The findings show that the physical condition of GMP Wushu Center athletes was generally good. This condition indicates that the athletes have a sufficient physical base to support Wushu training, particularly in sanda, which requires repeated explosive actions and rapid movement responses. The good strength score suggests that most athletes have adequate upper-body muscular endurance to support punching actions, clinch control, and defensive movements during training.

The speed component also showed a good profile, with a mean 30-m sprint time of 4.26 seconds. Speed is important in Wushu because athletes must close distance, avoid attacks, and initiate counterattacks quickly. Athletes with better sprint capacity may be more capable of performing fast offensive and defensive transitions. However, some athletes remained in the moderate category, which means speed drills, short acceleration training, and reaction-based sprint exercises should be maintained in the conditioning program.

Endurance was the component with the most visible need for improvement. Although the mean bleep-test result was moderate to good, two athletes were categorized as low. In Wushu sanda, endurance supports the athlete's ability to maintain movement quality across rounds and recover between high-intensity exchanges. This finding is consistent with the idea that combat-sport athletes require

not only explosive power but also adequate aerobic and anaerobic capacity to sustain repeated actions.

Agility was generally good, but individual differences were still evident. Agility is essential because Wushu athletes frequently change direction while attacking, defending, and adjusting distance. The lower agility scores found in two athletes indicate the importance of including specific footwork, shuttle movement, balance, and coordination drills. The practical contribution of this study is that coaches can use the results as baseline information to individualize training. Athletes with lower endurance and agility scores should receive additional conditioning without reducing technical training quality.

CONCLUSION

The physical condition profile of Wushu athletes at GMP Wushu Center, East OKU, was generally in the good category. Strength, speed, and agility showed good average results, while endurance was moderate to good and still required improvement for several athletes. Coaches are advised to maintain the existing strength, speed, and agility training while giving additional attention to endurance development through structured and progressive conditioning programs. Future studies should involve a larger sample and include additional components such as flexibility, power, balance, and reaction speed.

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