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Some Measures to Improve Physical Fitness for Sports Management Students at Tra Vinh University

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ABSTRACT: This study aimed to select and evaluate effective measures to improve physical fitness among Sports Management students at Tra Vinh University. The study involved 100 students from two classes (DA25QLTDA and DA25QLTDB). Research methods included document analysis, surveys, pedagogical testing, pedagogical experiment, and statistical analysis.

Physical fitness was assessed using standard tests, including a 30-meter sprint, standing long jump, sit-ups, 800-meter run (female), 1500-meter run (male), and sit-and- reach test. Based on the initial assessment, four intervention measures were implemented over a 12-week experimental period.

The results showed that all physical fitness indicators improved significantly after the experiment ($p < 0.05$), particularly in endurance and lower-body strength. The findings provide scientific evidence for improving the effectiveness of physical education programs in universities.

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KEYWORDS:
physical fitness, physical education, students, sports management, Tra Vinh University

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1. INTRODUCTION

Physical fitness plays a fundamental role in the comprehensive development of university students, contributing not only to health but also to academic performance and future professional capacity. For students majoring in Sports Management, physical fitness is especially important, as they are future educators, coaches, and sports organizers who require both theoretical knowledge and practical physical competence.

However, in recent years, many university students have shown a decline in physical fitness due to sedentary lifestyles, academic pressure, and insufficient engagement in regular physical activity. This issue is particularly concerning even among students specializing in sports-related fields.

Although previous studies have addressed physical fitness development, research focusing on Sports Management students in specific institutional contexts, such as Tra Vinh University, remains limited. Therefore, identifying and evaluating appropriate training measures is both necessary and practically significant.

This study aims to:

(1) assess the current physical fitness status of students;

(2) select appropriate measures to improve physical fitness;

(3) evaluate the effectiveness of these measures through pedagogical experimentation.

2. METHODS

2.1. Research Design

The study employed a pre-test and post-test experimental design without a control group to evaluate the effectiveness of selected interventions.

2.2. Participants

A total of 100 students (male and female) majoring in Sports Management from two classes (DA25QLTDA and

DA25QLTDB) at Tra Vinh University participated in the study. All participants were in normal health condition and voluntarily engaged in the study.

2.3. Research Methods

Document Analysis

Relevant scientific literature on physical education and fitness development was reviewed to establish a theoretical foundation.

Survey Method

A questionnaire was conducted to collect information on students' physical activity habits and awareness.

Pedagogical Testing

Physical fitness was evaluated using the following tests:

- 30-meter sprint (speed)
- Standing long jump (lower-body strength)
- Sit-ups (core strength)
- 800m run (female), 1500m run (male) (endurance)
- Sit-and-reach test (flexibility) Pedagogical Experiment

Based on initial assessments, selected training measures were applied over 12 weeks during physical education classes.

Statistical Analysis

Data were processed using descriptive statistics (Mean ± SD) and paired t-tests to compare pre- and post-experiment results, with significance set at $p < 0.05$.

3. RESULTS AND DISCUSSION

3.1. Current Physical Fitness Status

Initial testing indicated that the overall physical fitness of students was at an average level compared to standard benchmarks. However, several limitations were identified, particularly in endurance and lower-body strength.

Survey results revealed that many students did not maintain regular physical exercise habits outside of class hours, mainly due to academic workload and limited awareness of the importance of physical activity.

These findings highlight the need for targeted interventions to improve students' physical fitness.

3.2. Selected Measures for Improving Physical Fitness

Based on theoretical and practical considerations, four key measures were selected:

1. Enhancing endurance training through running exercises (short-distance, long- distance, and interval training)
2. Integrating strength and speed development exercises (plyometrics, sprint drills, acceleration runs)
3. Encouraging participation in extracurricular sports activities
4. Developing regular exercise habits among students

These measures were designed to be feasible within the university's physical education program.

3.3. Experimental Results

After 12 weeks of intervention, all physical fitness indicators showed improvement compared to …pre-test results

- Sprint performance improved, indicating enhanced speed
- Standing long jump results increased, reflecting improved lower-body strength
- Endurance performance (800m/1500m) improved significantly
- Flexibility (sit-and-reach) also showed noticeable enhancement

Statistical analysis indicated that these improvements were significant ($p < 0.05$), confirming the effectiveness of the applied measures.

The results of the students' physical fitness tests before and after the experiment are presented in Table 1.

Table 1. Comparison of Pre- and Post-test Physical Fitness Results

Test	Unit	Pre-test (Mean ± SD)	Post-test (Mean ± SD)	t	p
30m Sprint	s	5.21 ± 0.32	4.93 ± 0.28	4.12	<0.05
Standing Long Jump	cm	186.4 ± 15.2	199.8 ± 14.6	4.35	<0.05
Sit-ups (30s)	reps	21.3 ± 4.1	25.7 ± 3.8	5.02	<0.05

800m (female)	s	245.6 ± 18.3	228.4 ± 16.9	3.88	<0.05
1500m (male)	s	412.7 ± 25.6	385.2 ± 22.1	4.27	<0.05
Sit-and-reach	cm	12.5 ± 5.4	16.8 ± 5.1	3.76	<0.05

Note: Values are presented as Mean ± SD. All differences are statistically significant at $p < 0.05$.

The results presented in Table 1 indicate that all physical fitness indicators improved after the experimental period. The 30-meter sprint time decreased from 5.21 ± 0.32 s to 4.93 ± 0.28 s ($p < 0.05$), demonstrating a significant improvement in speed.

Similarly, the standing long jump increased from 186.4 ± 15.2 cm to 199.8 ± 14.6 cm ($p < 0.05$), reflecting enhanced lower-body strength.

Endurance performance also improved significantly, as shown by reduced running times in both the 800m (female) and 1500m (male) tests ($p < 0.05$).

Additionally, sit-up performance and flexibility (sit-and-reach test) showed statistically significant improvements ($p < 0.05$).

Table 2. Percentage Improvement (%)

Test	**Improvement (%)**
30m Sprint	5.4%
Standing Long Jump	7.2%
Sit-ups (30s)	20.6%
800m Run	7.0%
1500m Run	6.7%
Sit-and-reach	34.4%

The percentage improvement analysis showed the greatest gains in flexibility (34.4%) and core strength (20.6%), while speed and endurance improved moderately (5–7%).

3.4. Discussion recommendations

The results demonstrate that structured and targeted physical training interventions can significantly improve students' physical fitness.

The improvement in endurance can be explained by cardiovascular adaptations resulting from regular running exercises, while gains in strength are associated with neuromuscular adaptations from strength and plyometric training.

These findings are consistent with previous studies by Bompa & Buzzichelli (2019), which emphasize the effectiveness of systematic training programs, and align with WHO (2020) recommendations on increasing physical activity among young adults.

However, the study has some limitations, including the absence of a control group and a relatively short experimental duration. Future studies should address these limitations to enhance research validity.

Similar improvements have also been reported in studies on university students in developing countries.

4. CONCLUSION AND RECOMMENDATIONS

Conclusion

The study revealed that physical fitness among Sports Management students at Tra Vinh University remains at an average level, with notable limitations in endurance and strength.

The four selected intervention measures proved effective in significantly improving all measured physical fitness indicators. These results confirm the feasibility and effectiveness of integrating targeted physical training into university physical education programs.

Recommendations

Universities should enhance physical education programs by incorporating structured fitness training

Students should be encouraged to participate in extracurricular sports activities Long-term physical activity habits should be promoted

Future research should include control groups and longer intervention periods

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