



THE PRACTICE OF PHYSICAL STRENGTH OF FEMALE STUDENTS AT THE VIETNAM NATIONAL UNIVERSITY, HO CHI MINH CITY, VIETNAM

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Abstract:

This study aims to provide comprehensive and precise scientific information about the practice of physical strength of female students at the Vietnam National University, Ho Chi Minh City (VNUHCM). The study employed literature synthesis, expert interviews, pedagogical assessment, and statistics in physical training and sports to sort out tests of female students' physical strength at VNUHCM. Based on this, the physical strength of 19-year-old VNUHCM students was assessed by reference to Decision No. 53/2008/ Đ-BGD&ĐT issued by the Ministry of Education and Training. The results showed that the physical strength of the 19-year-old VNUHCM female students judged "Good" accounted for 4.37%, "Acceptable" accounted for 5.69%, and "Failed" accounted for 89.94%.

Keywords: practices, physical strength, Vietnam National University - Ho Chi Minh City

1. Introduction

Humans are the motivation for the cause of socialist construction, the core entity for creativity, materials, and culture, and for building an equal and humane society. Thus, humans need to be developed comprehensively, highly in terms of intelligence, strongly in terms of physical strength, richly in terms of spirit, and purely in terms of ethics.

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Direction No. 17–CT/TW pointed out that: *“Physical training and sports constitute an important part in the national cause of socio-economic development, aiming to foster and bring into play the human factor; contribute to raising physical strength, educating in personality, morality and healthy lifestyle, enriching the cultural life and bringing into play the national spirit of the Vietnamese people for socio-economic development.”*

In response to the international integration and multidisciplinary development trend, through history, the Party and Government have planned and built strategies for physical training and sports development that are appropriate for the sociopolitical state. The socio-economic development strategy explicitly identified *“Rapidly develop human resources, especially high-quality human resources, focusing on fundamentally and comprehensively innovating the national education”* as a breakthrough strategy.

The plan for general physical development and stature improvement of the Vietnamese in the period 2011 - 2030 has confirmed that the quality of physical training and sports in Vietnamese schools overall reveals some shortcomings. The Vietnamese students' physical strength has yet to qualify for the requirements for the cause of national industrialization and modernization.

Physical activities (PA) and a balanced diet strongly impact human health (Concha-Cisternas Concha-Cisternas, Y., Guzmán-Muñoz, E., Valdés-Badilla, P., Lira-Cea, C., Petermann, F., & Celis-Morales, C., 2018). In order to improve physical activities for students, extracurricular activities are an optimal solution in the present.

Extracurricular activities are defined as *“being outside the regular curriculum of a school or college”*. According to Cole, Rubin, Feild and Giles (2007), student's participation in extracurricular activities is an important aspect of the education experience. Rubin, Bommer and Baldwin (2002) remarked that: *“One intuitive notion is that extracurricular activities are a place where students look to utilize, and perhaps refine and develop, their interpersonal skills”*. In the same vein, Rynes, Trank, Lawson, and Ilies (2003) surveyed employers and found that students' involvement in extracurricular activities is seen as an effective method to hone their leadership and communication skills. Barnett (2007) has described extracurricular activities as *“... sports, academic clubs and special interest groups”*. Fredricks và Eccles (2006) also agreed that: *“Both scholars and youth policy advocates argue that participation in high-quality extracurricular activities, such as sports and school clubs, is a productive use of adolescents' leisure time...”* Bartkus Bartkus, K. R., Nemelka, B., Nemelka, M., & Gardner, P. (2012) synthesized various findings and suggested the definition of extracurricular activities, that is, the activities taking place outside of school hours and regular curriculum, managed by the school, having no grades or accumulated credits, both academic and non-academic, in which learners can be involved voluntarily or electively.

In order to organize extracurricular activities for students, it is necessary to collect accurate information about their physical strength. This is a crucial basis for suggesting feasible and practical solutions for physical training at VNUHCM, helping to improve the student's physical strength and orientate their training. Recognizing these important

points, we have carried out the research: “The practice of physical strength of female students at the Vietnam National University, Ho Chi Minh City”

The study aims to discover and provide significant information about the practice of physical strength of VNUHCM female students.

2. Materials & methods

2.1 Participants

This study utilized non-probability convenience sampling. At the time of research in September 2022, there were 7584 students from affiliated universities and faculties of VNUHCM studying at the VNUHCM Sports Center. For convenience purposes and to focus on the same age range samples, the study involved VNUHCM second-year students.

The sample size of students participating in the physical strength assessment for the experiment and practice survey was 26% of VNUHCM students, including 7314 19-year-old sophomores (born in 2003; 3885 males and 3429 females; September 2022).

The study recruited 3429 VNUHCM 19-year-old female sophomores as research participants.

The student participants have normal health and physical development without any disability and disease and usually take part in intracurricular subjects and physical training activities at school in accordance with the program of the VNUHCM Sports Center.

2.2 Methods

To conduct the aforementioned analysis, the study employed the following methods:

The literature synthesis aims to systemize the relevant literature to establish the theoretical framework, identify criteria, and discuss the research results.

The interviews were conducted in person with 12 experts in physical education around the country to determine tests on the physical strength of the participants.

The pedagogical assessment was to validate the physical strength test, composed of 4 tests of student’s physical strength according to Decision No. 53/2008/QĐ-BGDĐT dated September 18, 2019, by the Ministry of Education and Training. The 4 tests include:

- Speed test: 30-meter sprint (second),
- Power test: long jump (cm),
- Motor coordination test: 4x10-meter shuttle run (second),
- Endurance test: 5-minute run at the student’s own pace (calculated by distance and meter).

The collected data were statistically processed. All data were calculated with the assistance of SPSS 22.0. The outcomes included mean (M), standard deviation (SD), Independent samples t-Test, and correlation coefficient (Pearson).

3. Results and discussion

3.1 The practice of VNUHCM female students' physical strength

To assess the physical strength of VNUHCM female students, the study was based on 4 criteria: (1) 30m sprint, (2) long jump (cm), (3) 4x10m shuttle run (s), and (4) 5-minute run (m). The results are presented in Table 1.

Table 1: The physical strength of 19-year-old VNUHCM female students (n = 3249)

No.	Criteria	Indicator	\bar{X}	SD	C _v	ϵ
1	30m sprint (s)		5.88	0.47	8.06	0.01
2	Long jump (cm)		166.77	14.76	8.85	0.01
3	4x10m shuttle run (s)		11.93	0.88	7.39	0.01
4	5-minute run (m)		759.88	95.57	12.58	0.01

The figures in Table 1 showed that the coefficient of variance (C_v), a parameter reflecting the variance between samples, of all indicators was highly homogenous (indicating small dispersion fluctuations; C_v<10) among the participants in 30m sprint, 4x10m shuttle run, and long jump. These indicators tend to be commonly homogenous due to small effects from the environment and living conditions such as nutrition, routine, working hours, etc. At the same time, these indicators can be measured by a "scale", which contains an absolute "zero".

The indicator showing medium homogeneity among the participants (10%<C_v<20%) was the 5-minute run.

Although there was a high coefficient of variance among the participants, the mean value of the sample was sufficient to represent the population ($\epsilon < 0.05$). Hence, the analysis can proceed.

3.2 Assessment of the physical strength of female students at VNUHCM dormitory based on Decision No. 53/2008/BGDĐT

Results of the 19-year-old VNUHCM female students' physical strength based on Decision No. 53/2008/BGDĐT are presented in Table 2.

Table 2: Assessment of 19-year-old VNUHCM female students' physical strength according to Decision No. 53/2008/BGDĐT

		30m sprint (s)	Long jump (cm)	4x10m shuttle run (s)	5-minute run (m)	Students' physical strength
Standard	Good	< 5,70	> 169	< 12,00	> 940	
	Acceptable	≤ 6,70	≥ 153	≤ 13,00	≥ 870	
Male students of VNUHCM	Good	1078 SV (31.44%)	1411 SV (41.15%)	1952 SV (56.93%)	151 SV (4.40%)	150 SV (4.37%)
	Acceptable	2285 SV (66.64%)	1448 SV (42.23%)	1063 SV (31.00%)	249 SV (7.26%)	195 SV (5.69%)
	Failed	66 SV (1.92%)	570 SV (16.62%)	414 SV (12.07%)	3029 SV (88.33%)	3084 SV (89.94%)

Table 2 reveals the ranking of 19-year-old VNUHCM female students' physical strength based on Decision No. 53/2008/BGDĐT. Accordingly, 150 students ranked "Good", accounting for 4.37%; 195 ranked "Acceptable", accounting for 5.96%; and 3084 ranked "Failed", accounting for 89.94%. Among the criteria, 90% of the students have not qualified for endurance (5-minute run). Meanwhile, the criterion of 30m sprint (speed) was gained "acceptable" by 66% of the students (2285 students), which is the highest rate recorded. Regarding the "Good" rank, the 4x10m shuttle run (motor coordination) reached the highest rate of over 56% (1952 students), while the 5-minute run (endurance) obtained the least at a rate of 4.40% (151 students). The assessment results suggest that 19-year-old VNUHCM female students have poor endurance and leg muscle strength, yet speed and motor coordination have been their advantage.

The percentage of physical strength of 19-year-old VNUHCM female students based on the standard of the Ministry of Education and Training is displayed in Figure 1.

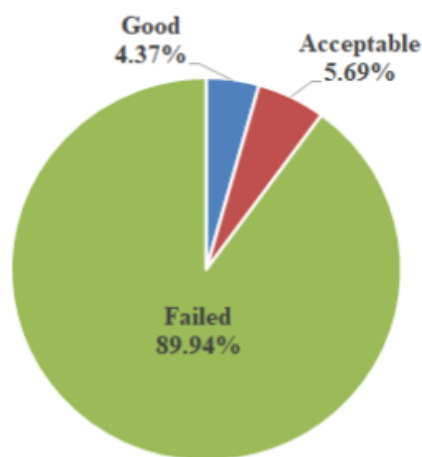


Figure 1: The percentage of physical strength of 19-year-old VNUHCM female students based on the standard of the Ministry of Education and Training

3. Conclusion

The practice of physical strength of 19-year-old VNUHCM female students based on Decision No. 53/2008/BGDĐT can be reported as follows: 4.37% of the students were ranked "Good", 5.69% were ranked "Acceptable", and 89.94% were ranked "Failed". The analysis suggests that 19-year-old VNUHCM female students have poor endurance and leg muscle strength, yet speed and motor coordination have been their advantage.

Conflict of Interest Statement

The authors declare no conflicts of interest.

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