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COMPONENT ELEMENTS AFFECTING THE ASSESSMENT OF LEVEL STRENGTH AND ACHIEVEMENTS OF THE PERFORMANCE OF VIETNAMESE EXCELLENT BASKETBALL MALE PLAYERS

Nguyen Ngoc Nga[1],
Nguyen Truong Phuong Uyen[2i]
[1]MSc.,
University of Finance - Marketing,
Vietnam
[2]Dr.,
University of Finance - Marketing,
Vietnam

Abstract:
A basketball athlete's physical strength is a multi-component structure, but the impact of those component elements is not similar. The research results of the thesis have identified the influencing factors of component groups on the performance of excellent male basketball players in Vietnam.

Keywords: component elements, fitness levels, achievement in competitions, excellent male Basketball players

1. Introduction

A basketball athlete's physical strength is a multi-component structure, but the impact of those component elements is not similar. Hence, in the process of fitness assessment, attention must be paid to the level of influence of these groups of factors. If the group of factors has a strong effect on the performance of athletes, that group of factors must be the basic one in the process of training and physical assessment for athletes.

From the practical research work, through the reference of domestic and foreign authors' works, it shows that the influence level of the groups of factors is different depending on the competition position of the research objects; there are a lot of influencing groups, and there will be some groups which have little impact on the performance of the players. Therefore, determining the influencing factors will be an important background for developing the evaluation criteria of each indicator, test, and

[i] Correspondence: email nguyenngocnga@ufm.edu.vn,, nguyenuyen@ufm.edu.vn

each group of component elements to assess the fitness of excellent male basketball players in Vietnam.

2. Research Methods

During the research process, this thesis uses the following research methods:

- pedagogical testing methods,
- medical examination methods,
- statistical mathematical methods.

3. Results and Discussion

In order to determine the influencing factors of fitness factors group on the performance of Vietnamese excellent basketball male players, before the dissertation, the selection of fitness assessment tests for Vietnamese excellent basketball male players was conducted through the synthesis and analysis of documents related to test preparation in sports in general and basketball in particular.

Through statistical algorithms, the thesis has selected 14 tests of 4 groups of factors:

1) Morphology (3 indicators);
2) Psychology (2 indicators);
3) General fitness – expertise (6 indicators);
4) Biomedical function (4 indicators).

All test results of these tests ensure the reliability and notification in assessing the fitness level of Vietnamese excellent male basketball players.

This project has conducted preliminary checks on 60 Vietnamese excellent basketball male players, belonging to 5 clubs nationwide and used methods to determine the influence of each factor group on the achievement sports of Panma I.C, EngoLG (this method will determine the coefficient of multi-factor correlation Rx, y, z...) thereby, determining the influence factors (β) of 4 factor group (morphology, psychologyy, fitness, biomedical function) to athletic performance, according to the position of the object of the study. Results are presented in tables 1, 2, 3, 4, 5.

Table 1: Results of examination of assessing the training level of Vietnamese excellent male basketball players

No	Test	Test results ($\overline{X} \pm \delta$)		
		Midfielder (n=20)	**Centre Defender (n=20)**	**Defender (n=20)**
1	Standing height (cm)	178.29±3.61	175.53±3.29	173.14±3.37
2	Quatelet indicator (g/cm)	378.87±16.88	365.25±17.23	353.15±14.69
3	Single reaction (ms)	165.58±7.39	172.19.54	178.65±8.23
4	Multi reaction (ms)	237.57±5.58	246.46±5.84	255.35±12.33
5	Running 30 m with high starting (s)	4.19±0.11	4.27±0.13	4.35±0.14
6	Running 60 m with high starting (s)	6.70±0.19	7.26±0.20	7.51±0.38
7	Cooper test (m)	3057.89±67.00	2977.28±102.27	2896.68±110.98
8	High jumping to the basketball board (cm)	305.57±1.42	304.36±1.56	303.14±1.47
9	Leading the ball into the basket 2 times (s)	9.18±0.16	9.34±0.21	9.49±0.18
10	Living capacity (liters)	3.94±0.10	3.86±0.09	3.77±0.11
11	Frequency of pulse after 1 standard voltage (times)	157.68±4.09	159.78±3.33	162.87±3.86
12	Speed anaerobic threshold VanT (m/s)	3.93±0.10	3.85±0.09	3.77±0.10
13	PWC170 (KG.m/min)	266.86±6.19	261.74±6.07	256.60±7.39
14	Performance in competition (points)	42.46±5.76	38.79±5.62	44.69±5.11

Table 2: Correlation coefficients between component elements with the performance of excellent Vietnamese male basketball players (midfielder position)

No	Element group	1	2	3	4	5
1	Performance in competition		0.838	0.851	0.838	**0.800**
2	Shape			0.824	0.809	**0.806**
3	Mentality				0.779	**0.788**
4	General fitness & expertise					**0.822**
5	Biomedical					
Multifactor correlation coefficients		**0.9510**				

Table 3: Correlation coefficients between component elements with the performance of Vietnamese excellent male basketball players (center defender position)

No	Element group	1	2	3	4	5
1	Performance in competition		0.812	0.801	0.760	**0.701**
2	Shape			0.779	0.709	**0.71**
3	Mentality				0.70	**0.76**
4	General fitness & expertise					**0.703**
5	Biomedical					
Multifactor correlation coefficients		**0.9366**				

Table 4: Correlation coefficients between component elements with the performance of excellent Vietnamese male basketball players (defender position)

No	Element group	1	2	3	4	5
1	Performance in competition		0.806	0.819	0.797	**0.831**
2	Shape			0.811	0.866	**0.801**
3	Mentality				0.800	**0.791**
4	General fitness & expertise					**0.732**
5	Biomedical					
Multifactor correlation coefficients		**0.9105**				

Table 5: Influencing factors (β)of component groups of the training level to the performance of excellent Vietnamese male basketball players

Athletes	Influencing factors							
	Shape		Mentality		General fitness & expertise		Biomedical function	
	Coefficient	% exchange	Coefficient	% exchange	Coefficient	% exchange	Coefficient	% exchange
Midfielder	0.142	14.2	0.166	16.6	0.492	49.2	0.158	15.8
Center defender	0.138	13.8	0.166	16.6	0.489	48.9	0.156	15.6
Defender	0.137	13.7	0.161	16.1	0.476	47.6	0.150	15.0

Results obtained in tables 1, 2, 3, 4 and 5 show that:

- The correlation coefficients between component groups, the tests for assessment of Vietnamese excellent male basketball players, illustrate a close correlation.
- Component groups assessing the athlete's fitness are all factors that have a strong effect on the achievements of Vietnamese excellent male basketball players, and these factors have relatively equal influence on all three positions (midfielder, center defender, defender). However, groups of general and professional physical factors have a major influence on the ability of the subjects to compete; the remaining group of psychological, morphological and biomedical factors also have an effect but at a lower level. This also clearly illustrates to us the professional factors (which are actually the change of motivational factors according to the professional trend), which are the factors most affected by the oriented exercise program.
- The total factors of the 04 factor group in 3 positions (midfielder: 0.9510%; center defender: 0.9366%; defender: 0.9105%) are all less than 100%. This shows that there are some other factors that affect the achievement of athletes that the thesis has not mentioned (nutritional factors, qualifications of the opponents).

4. Conclusion

Component element groups and selected tests show a close correlation with each other. The above results show that the appropriateness of component element groups, the tests

for assessing fitness level for the research subjects, has been shown through the close correlation between component element groups and achievements in competition.

The research process has identified the factors affecting the performance of Vietnamese excellent male basketball players according to 3 groups of competitive positions of the research subjects: The group of general and professional physical factors has a great influence on the performance of athletes, the group of psychological factors, morphology and biomedical functions also influences, but at a lower level.

Conflict of Interest Statement
The article has no conflicts of interest.

About the Author(s)
Position: Lecturer
Department: Law and Foreign Languages, University of Finance – Marketing.
Research interests in the field of physical education and sports coaching in schools.

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