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RESEARCH ON CRITERIA FOR EVALUATING THE PHYSICAL FITNESS AND SHOOTING EFFICIENCY OF THE WOMEN'S BASKETBALL TEAM OF SAIGON TECHNOLOGY UNIVERSITY, VIETNAM

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Abstract:
Sport-specific physical fitness and shooting efficiency are key factors influencing the technical execution and competitive performance of basketball players. This study aimed to select appropriate tests to assess the sport-specific physical fitness and shooting efficiency of female players on the basketball team at Saigon Technology University, Vietnam. The research employs methods of document analysis and synthesis, expert interviews, pedagogical testing, and statistical analysis. The research subjects include 20 female students from the D20, D21, D22, and D23 cohorts, who are athletes on the women's basketball team at Saigon University of Technology, Vietnam, and 30 coaches, experts, lecturers, and teachers with experience in teaching and coaching basketball in Ho Chi Minh City. Results: The study selected 10 tests, including 7 specialized physical fitness tests: 20 m high-start run, T-drill, Suicides Drill, dribbling according to a diagram, 30-second passing movement, defensive slide, and 5×28 m run; along with 3 tests to evaluate shooting effectiveness: 2-point shooting in 1 minute, 3-point shooting in 1 minute, and 30 free throws. The results of the repeated tests showed that all 10 tests achieved reliability, with a correlation coefficient $r = 0.803–0.933$ ($p < 0.01$). Conclusion: The selected system of 10 tests is reliable and suitable for the professional characteristics of the female athletes of the basketball team at Saigon University of Technology. The tests can be used to evaluate and monitor specialized physical fitness and shooting effectiveness, thereby providing a basis for adjusting the training process and improving competition performance.

Keywords: basketball; specialized physical fitness; shooting efficiency; test; athlete; Saigon University of Technology, Vietnam

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1. Introduction

Basketball is a high-intensity team sport characterized by continuous alternation between activities such as running, accelerating, decelerating, changing direction, jumping, and executing techniques under varying conditions of space, time, and competitive pressure. Therefore, the performance of athletes depends on the coordination of many factors, among which specialized physical fitness and technical execution ability play an important role [1,2]. Overviews of the physical characteristics of basketball players show that strength, speed, jumping ability, agility, and specialized endurance are factors that need to be considered in the evaluation and training of basketball players [1,3].

For women's basketball, the requirements for specialized physical fitness need to be considered in relation to the ability to perform technical skills. In competition, athletes must continuously perform high-intensity activities such as accelerating, sudden stops, changing directions, jumping, and repeating efforts under short recovery conditions. These abilities not only determine the capacity for movement, contesting, and defense but also lay the foundation for effectively executing offensive techniques [4,5]. Recent evidence on female basketball players shows that developing explosive strength and agility can improve various fitness indicators and some basketball-specific skills [4].

In the offensive technical system, shooting is a direct action that scores points and is crucial to the effectiveness of the game. The effectiveness of shooting not only depends on the technique but is also influenced by coordination, strength, speed, jumping ability, body stability, and the ability to maintain technical quality under fatigue. Therefore, evaluating basketball players needs to consider both specialized physical fitness and the effectiveness of executing the shooting technique simultaneously, rather than assessing these two components completely separately. Domestic studies by Phan Thanh Canh [6], Dinh Dac Thi [7], and Le Minh Chi [8] also show that developing specialized physical qualities is significant for the athletes' ability to perform techniques and shooting efficiency.

Scientific assessment of athletes' levels is the basis for determining training status, identifying strengths and limitations, controlling the training process, and adjusting the amount of exercise. Le Nguyet Nga [9], when studying the training levels of male and female high-level basketball players in Ho Chi Minh City, approached the evaluation of athletes from multiple perspectives; while Le Nguyet Nga and her colleagues [10] emphasized that the selection of criteria and tests in the recruitment and evaluation of athletes must ensure scientific validity, reliability, and alignment with professional characteristics. In sports measurement, the selected test needs to accurately reflect the ability being assessed and be feasible under practical training conditions [11,12].

International studies also show that field test systems are useful tools for assessing and monitoring the physical condition of basketball players. Gál-Pottyondy and colleagues synthesized 93 studies and identified several validated tests to assess strength, explosive strength, speed, agility, endurance, and basketball-specific abilities; they also noted that there is still a lack of a standardized and uniformly used testing system for all

athlete groups [13]. Another systematic review shows that indicators of agility, speed, and jumping ability are important parameters when evaluating basketball players; the selection of tests should consider the playing position, skill level, age, and gender of the subjects [14]. This shows that a standardized testing system should not be mechanically applied to all teams, but rather that criteria should be selected and validated according to the characteristics of each group of athletes.

In Vietnam, there have been many studies related to the assessment and development of physical fitness and techniques for basketball players. Nguyen Ngoc Hai studied the development of strength in the Ho Chi Minh City women's basketball team [15]; Nguyen Thi Minh Cam focused on the specialized endurance of female basketball players [16]; Phạm Tuấn Đạt developed a system of physical and technical exercises for the Ton Duc Thang University women's basketball team [17]; Ngô Kiên Trung evaluated the physical and technical development of the Ho Chi Minh City University of Education women's basketball team [18]. Other studies also approach strength, speed, and shooting efficiency in different groups of athletes [6–8,19,20]. These works provide an important foundation for selecting basketball player assessment content in Vietnamese practice.

However, the characteristics of training levels, training environments, training durations, and competition requirements of female university team athletes are different from those of professional athletes, young athletes, or students specializing in basketball. Current studies mainly focus on evaluating individual physical qualities, developing exercises, or researching different groups of athletes; there is a lack of research selecting a set of criteria that both reflect specialized physical fitness and assess shooting effectiveness, suitable for the characteristics of the women's basketball team at Saigon University of Technology. Establishing a scientifically based and feasible criteria system will help coaches objectively assess athletes' levels, monitor changes during training, and provide a basis for developing and adjusting training programs.

Based on the above issues, the research was conducted to select and determine the criteria for evaluating the specialized physical fitness and shooting effectiveness of the women's basketball team at Saigon University of Technology, Vietnam, contributing to the establishment of a scientific basis for the inspection, evaluation, and improvement of the team's training effectiveness.

2. Research materials and methods

2.1 Methods

2.1.1 Literature review method

This method enables the synthesis and systematization of sport-specific physical fitness tests and shooting performance metrics relevant to basketball, drawing upon scientific literature, instructional materials, and practical coaching experience. The synthesized findings facilitate the establishment of a theoretical framework, the definition of research objectives, and the discussion of the study's results.

2.1.2 Interview method

This method facilitates the collection of expert opinions. In-depth interviews using a pre-designed questionnaire were conducted with experts, sports scientists, and coaches (across two rounds) to determine the suitability and priority of sport-specific physical fitness tests and shooting performance metrics for the women's basketball team at Saigon Technology University, Vietnam.

2.1.3 Pedagogical testing method

This method involves data collection using ten tests designed to assess sport-specific physical fitness and shooting performance among 20 female athletes from the Saigon Technology University basketball team in Vietnam. Initial and follow-up tests (conducted one week later) were administered to evaluate the reliability of the tests.

2.1.4 Statistical methods

These were employed to process and analyze data collected during the research. The study utilized formulas to calculate means and standard deviations, performed Pearson correlation analysis on data regarding specialized physical fitness assessments and shooting performance, and applied the chi-square test to interview results. Data processing was conducted using SPSS 26.0 software.

2.2 Participants

2.2.1 Interview subjects

30 coaches, experts, lecturers, and teachers involved in basketball instruction and coaching in Ho Chi Minh City.

2.2.2 Survey subjects

20 female students (cohorts D20, D21, D22, and D23) from the Saigon Technology University women's basketball team, Vietnam.

3. Results

The study to identify sport-specific physical fitness and shooting efficiency tests for the women's basketball team at Saigon Technology University (Vietnam) was conducted according to the following steps:

- **Step 1:** Compile sport-specific physical fitness and shooting efficiency tests from domestic and international research.
- **Step 2:** Interview coaches, experts, lecturers, and instructors.
- **Step 3:** Assess the reliability and validity of the tests.

3.1. Compilation of tests for sport-specific physical fitness and shooting performance in basketball from domestic and international research studies

To develop the initial testing system, the study analyzed and synthesized curricula, specialized literature, and research from both domestic and international sources that related to the assessment of general physical fitness, sport-specific fitness, technique, and shooting performance among basketball players. The main documents include research by Le Nguyet Nga (2007) [9], Le Nguyet Nga et al. (2016) [10], Pham Tuan Dat (2016) [17], Nguyen Ngoc Hai (2004) [15], Huynh Long Bao (2015) [21], Lieu Hoang Trung (2018) [19], Bui Thong Thai (2017) [20], Le Minh Chi (2010, 2025) [8], Nguyen Thi Minh Cam (2010) [16], Ngo Kien Trung (2018) [18], Dinh Dac Thi [7], Phan Thanh Canh (2013) [6], Mancha-Triguero et al. (2019) [22], Jakovljevic et al. (2012) [3], Scanlan et al. (2014) [5], Carvalho et al. (2017) [23], Gál-Pottyondy et al. (2021) [13], Hoffman (2002) [2].

The summary results show that the tests used in basketball are quite diverse, reflecting the specific physical and technical requirements of this sport. For specialized physical fitness, domestic studies focus on strength, speed, specialized endurance, and the physical development of basketball athletes in different groups [7,8,15,16,19,20]. International studies continue to emphasize the role of strength, explosive strength, speed, agility, and specialized endurance in the physical structure of basketball athletes [2,3,5,22]. These are abilities directly linked to activities that frequently occur in competitions, such as acceleration, deceleration, changing direction, defensive movement, jumping, ball control, and continuous high-intensity activity.

Notably, Jakovljevic et al. [3] used speed and agility indices to evaluate basketball players; Scanlan et al. [5] analyzed linear speed and various forms of agility under different movement conditions; Mancha-Triguero et al. [22], through a systematic review, have indicated the diversity of physical fitness components and assessment methods in basketball players. Carvalho et al. [23] studied the value and usefulness of the Line Drill test, while Gál-Pottyondy et al. [13] compiled the field tests used in basketball. These results indicate that the selection of specialized physical fitness tests needs to both reflect the movement characteristics of basketball and ensure scientific validity and practical applicability in training [2,13,23].

Regarding shooting efficiency, domestic studies have approached it from various angles. Phan Thanh Canh [6] focuses on developing a system of exercises to enhance shooting efficiency; Dinh Dac Thi [7] studies the development of speed strength linked to the execution of long-range shooting techniques; Pham Tuan Dat [17] simultaneously researches physical and technical exercises for the women's basketball team. The studies on female basketball players by Nguyen Ngoc Hai [15], Nguyen Thi Minh Cam [16], Ngo Kien Trung [18], and Le Minh Chi [8] also provide a basis for examining the relationship between specialized physical fitness and the ability to perform techniques during training and competition.

From the characteristics of the shooting technique, it can be seen that evaluating shooting effectiveness should not only rely on the number of successful shots but also consider the test conditions, such as shooting position and distance, number of attempts,

time limits, movement patterns before shooting, and the athlete's physical state [6,7,17]. This approach helps the test better reflect the ability to apply the technique under professional conditions: in competitions, athletes rarely perform a shot in a completely static state and often have to coordinate movements, stops, jumps, and ball handling before finishing the shooting action.

In general, studies both domestically and internationally show that specialized physical fitness and shooting efficiency are two important groups of abilities that need to be considered simultaneously when evaluating basketball players [6–9,13,15–23]. Specialized physical fitness provides the foundation for athletes to perform and maintain techniques under high-intensity conditions, while shooting efficiency reflects the ability to apply physical and technical skills in offensive activities. Therefore, the synthesis and selection of tests from both groups are necessary to build an appropriate evaluation system for the female athletes of the basketball team at Saigon University of Technology. Through the initial synthesis and screening process, the study identified 39 tests, including 19 tests for evaluating specialized physical fitness and 20 tests for assessing shooting effectiveness, serving as the basis for the next selection steps. This is just the initial candidate testing system, not the official evaluation criteria system yet. These tests need to continue being evaluated through expert opinions and the validation of necessary measurement characteristics before selecting the appropriate criteria system for the female basketball players of the Saigon University of Technology team, Vietnam.

3.2. Interviewing coaches, experts, lecturers, and teachers

Based on a comprehensive review of specialized literature and existing scientific works, the study has identified a list of 39 tests commonly used to assess professional physical fitness and shooting technique for female basketball players.

To ensure accuracy and objectivity in selecting appropriate tests for the women's basketball team at Saigon University of Technology, the study conducted two rounds of interviews with coaches, experts, lecturers, and teachers experienced in basketball training and coaching in Ho Chi Minh City through surveys:

- **Round 1:** 30 surveys were sent to 30 experts (including lecturers, teachers, referees, managers, and coaches) to gather opinions on the selection of tests. All 30 surveys have been collected and deemed valid.
- **Round 2**: Continue sending 30 survey forms to the same group of experts to reconfirm the test selection. 29 valid surveys have been collected.

To enhance objectivity and provide an opportunity for experts to contribute further, each survey form includes a space for them to propose additional tests they believe are necessary. Although some additional opinions have been recorded, due to the limited number of these opinions and the fact that the proposals do not fully align with the research objectives, no tests were added to the initially compiled test system.

The interview form is designed with a simple response format: participants will mark (x) in the "Agree" or "Disagree" box to indicate their choice for each assessment test.

The tests considered for selection must meet the following criteria:

- **Relevance:** The test must be able to accurately assess the specialized physical fitness and shooting technique for the women's basketball team of Saigon University of Technology.
- **High level of consensus:** The test must receive at least 80% agreement in both rounds of interviews.
- **Consistency:** The results between the two rounds of interviews must ensure uniformity.

The results of the difference test between the two interviews using the squared index are obtained in Table 1.

Table 1: Results of the interview selection tests to assess the specialized physical fitness and shooting effectiveness of the female athletes of the basketball team at Saigon University of Technology

	Test	First interview (n = 30)		Second interview (n = 29)		Inspection	
		Agree	%	Agree	%	χ^2	P
Specialized physical fitness (19 tests)							
1	A1. Standing high jump (cm)	22	73.33	23	79.31	0.29	>0.05
2	A2. Standing long jump (cm)	19	63.33	20	68.97	0.21	>0.05
3	A3. 20m run with a high start (s)	26	86.67	27	93.1	0.67	>0.05
4	A4. 30m run with a high start (s)	27	90	21	72.41	2.99	>0.05
5	A5. 60m run with a high start (s)	14	46.67	20	68.97	3.01	>0.05
6	A6. Shuttle run 4x10m (s)	15	50	18	62.07	0.87	>0.05
7	A7. Dribbling in line with the diagram (s)	25	83.33	25	86.21	0.09	>0.05
8	A8. Dribbling at speed for 20m (s)	24	80	22	75.86	0.15	>0.05
9	A9. Flexible bending body (cm)	15	50	18	62.07	0.87	>0.05
10	A10. Move and pass the ball within 30 seconds (points)	25	83.33	25	86.21	0.09	>0.05
11	A11. Dominant hand grip strength (kg)	22	73.33	23	79.31	0.29	>0.05
12	A12. Push-up (reps)	24	80	21	72.41	0.47	>0.05
13	A13. 20-second back stretch (reps)	16	53.33	18	62.07	0.46	>0.05
14	A14. Hexagonal jump (s)	27	90	29	100	3.11	>0.05
15	A15. T-shaped running test (s)	26	86.67	27	93.1	0.67	>0.05
16	A16. Cooper test (m)	19	63.33	23	79.31	1.84	>0.05
17	A17. Flexible test 505 (s)	25	83.33	23	79.31	0.16	>0.05
18	A18. Suicides Drill Test (s)	28	93.33	28	96.55	0.32	>0.05
19	A19. Defensive slide (s)	24	80	26	89.66	1.07	>0.05
Basketball shooting technique (20 tests)							
1	B1. Jump and do 2 points shot in 1 minute (points)	18	60.00	16	55.17	0.14	>0.05
2	B2. Jump and do 2 points shot in 30 seconds (times)	25	83.33	19	65.52	2.46	>0.05
3	B3. Jump and do 3 points shot in 1 minute (points)	17	56.67	23	79.31	3.47	>0.05
4	B4. Jump and do 3 points shot in 30 seconds (times)	21	70.00	18	62.07	0.41	>0.05
5	B5. Dribble the ball down the court to the basket 4 times (s)	22	73.33	22	75.86	0.05	>0.05
6	B6. Dribble at speed for 27m to the basket, 10 times (s)	20	66.67	22	75.86	0.61	>0.05
7	B7. Dribble at speed, alternating hands, then shoot (2 sets)	23	76.67	21	72.41	0.14	>0.05

	Test	First interview (n = 30)		Second interview (n = 29)		Inspection	
		Agree	%	Agree	%	χ^2	P
8	B8. Moving to catch the ball, stop, and shoot from medium distance at 5 positions (2 shots/1 position) (points counted by successful shots).	11	36.67	10	34.48	0.03	>0.05
9	B9. Move the ball as much as possible within 30 seconds (points)	22	73.33	22	75.86	0.05	>0.05
10	B10. One-handed high jump shot from a medium distance	16	53.33	18	62.07	0.46	>0.05
11	B11. Shooting 2 points shot in 1 minute (points).	27	90	29	100	3.11	>0.05
12	B11. Shooting 3 points shot in 1 minute (points).	28	93.33	29	100	2.04	>0.05
13	B13. Shooting with a defender in 30 seconds (round)	19	63.33	21	72.41	0.56	>0.05
14	B14. Shooting from a distance of 5-6 meters.	20	66.67	22	75.86	0.61	>0.05
15	B15. Receive the ball and shoot for 30 seconds (reps)	21	70	23	79.31	0.68	>0.05
16	B16. Jump Shooting from 5 positions at medium distance, 5 shots from each position (points counted by successful shots)	22	73.33	24	82.76	0.77	>0.05
17	B17. 30 free throws in place (times)	29	96.67	27	93.10	0.39	>0.05
18	B18. 10 free throws in place (times)	21	70	26	89.66	3.54	>0.05
19	B19. Jump and shoot 3 points 10 times x 3 sets (successful shots)	25	83.33	22	75.86	0.51	>0.05
20	B20. Shooting by one hand from above in place, 20 shots (successful shots)	23	76.67	23	79.31	0.06	>0.05

Analysis results from Table 1 show that the chi-squared value (χ^2) of two expert interviews on tests to assess professional physical fitness and shooting techniques for the women's basketball team at Saigon University of Technology ranges from 0.03 to 3.54. This value is lower than the threshold of 3.84 ($p>0.05$), showing that there is no statistically significant difference between the two interviews. This confirms the high uniformity in the experts' opinions.

Based on the proposed principles and high consensus from two rounds of interviews of 75% or more, the study has selected 10 tests to assess professional physical fitness and appropriate basketball shooting techniques for the women's basketball team at Saigon University of Technology, including:

(1) 20m run with a high start (s),
(2) Dribbling in line with the diagram (s),
(3) Move and pass the ball within 30 seconds (points),
(4) Hexagonal jump (s),
(5) T-shaped running test (s),
(6) Suicides Drill Test (s),
(7) Defensive slide (s),
(8) Jump and do 2 points shot in 1 minute (points),
(9) Jump and do 3 points shot in 1 minute (points),
(10) 30 free throws in place (times).

3.3. Evaluate the reliability and informativeness of the tests

3.3.1 Reliability evaluation

To test the reliability of the test, we conducted an examination on 20 female athletes from the women's basketball team of Saigon University of Technology, Vietnam. Conducted the test in two sessions, with a 7-day interval between the two sessions, systematically administering the test to the subjects under the same conditions (time, test procedure, implementation process, location, field, testing equipment...). Then proceed to calculate the correlation coefficient (r) of the test between the two examinations (Do Vinh & Trinh Huu Loc, 2010; Duong Nghiep Chi, 2004). According to the convention:

- If $r \geq 0.8$ and $P < 0.05$, then the test is recognized as reliable.
- If $r < 0.8$, then the test is not reliable.

Through the calculation of the pairwise correlation coefficients presented in Table 2 below:

Table 2. The reliability coefficients of the specialized physical fitness tests and basketball shooting techniques selected for the women's basketball team of Saigon University of Technology (n = 20)

TT	Test Name	Initial		After 7 Days		r	p
		$\overline{X}_1$	s_1	$\overline{X}_2$	s_2		
1	20m run with a high start (s)	3.79	0.26	3.88	0.27	0.917	<0.01
2	Dribbling in line with the diagram (s)	9.46	1.01	9.55	0.98	0.905	<0.01
3	Move and pass the ball within 30 seconds (points)	18.20	1.51	20.00	1.72	0.874	<0.01
4	Hexagonal jump (s)	18.89	2.01	19.99	1.51	0.907	<0.01
5	T-shaped running test (s)	13.80	1.47	14.00	1.34	0.922	<0.01
6	Suicides Drill Test (s)	34.20	3.13	34.43	3.09	0.933	<0.01
7	Defensive slide (s)	12.94	1.38	13.24	1.35	0.911	<0.01
8	Jump and do 2 points shot in 1 minute (points)	19.70	1.75	19.70	2.45	0.812	<0.01
9	Jump and do 3 points shot in 1 minute (points)	2.80	0.83	2.90	0.91	0.803	<0.01
10	30 free throws in place (times)	17.85	1.66	17.55	1.85	0.884	<0.01

Table 2 shows that the reliability coefficient between the two tests of specialized physical fitness and shooting technique of the women's basketball team at Saigon University of Technology ranges from 0.803 to 0.933 (with $p < 0.05$). Thus, the specialized physical fitness and shooting technique tests of the women's basketball team at Saigon University of Technology have a moderate level of reliability, including: (8) 2-point shooting in 1 minute (points), (9) 3-point shooting in 1 minute (points), (10) 30 free throws in place (attempts). The remaining tests all have high reliability. In summary, all 10 selected tests are highly feasible for evaluating the specialized physical fitness and shooting technique of the women's basketball team at Saigon University of Technology.

Thus, through the steps of the thesis research, 10 tests have been selected to evaluate the specialized physical fitness and shooting technique of the women's basketball team at Saigon University of Technology: 20m run with a high start (s), Dribbling in line with the diagram (s), Move and pass the ball within 30 seconds (points),

Hexagonal jump (s), T-shaped running test (s), Suicides Drill Test (s), Defensive slide (s), Jump and do 2 points shot in 1 minute (points), Jump and do 3 points shot in 1 minute (points), 30 free throws in place (times).

3.4. Informativeness evaluation

In this study, the evaluation of physical qualities and shooting techniques for basketball is conducted within the specific context of a team sport. Therefore, it is not possible to use the collective performance of the entire team as the central factor to determine the correlation with each individual physical fitness and shooting technique component. This is especially true and inappropriate when the subject of study is the women's basketball team of Saigon University of Technology, Vietnam.

To ensure the relevance and effectiveness of the assessment tool, we conducted a comprehensive review of the theoretical basis and sought in-depth consultations with experts. This process led to the selection of 10 specific tests to evaluate the professional physical fitness and shooting technique of the women's basketball team at Saigon University of Technology, Vietnam.

With this methodology, we affirm that the selected content and tests possess full theoretical informativeness. In this specific case, calculating empirical informativeness is unnecessary and unfeasible, especially with the subject of the women's basketball team at Saigon University of Technology, Vietnam.

4. Discussion

The study has identified 10 tests to assess specialized physical fitness and shooting effectiveness for female athletes of the Saigon University of Technology basketball team through a process of synthesizing 39 initial tests, consulting experts, and reliability testing. This approach aligns with the view that basketball player assessments should use tests that are specific, feasible, and reflect important competencies in training and competition [2,9,10,13,22]. Gál-Pottyondy and colleagues [13] also argue that field tests in basketball need to be selected according to the characteristics of the subjects and the evaluation purpose, rather than applying a common system for all athlete groups.

In the 10 selected tests, 7 specialized physical fitness tests relatively comprehensively reflect the specific movement requirements of basketball, including speed, agility, ball-handling coordination, quickness, speed endurance, and defensive movement. This result is consistent with studies showing that speed, agility, the ability to change direction, and the ability to perform repeated high-intensity efforts are important components of basketball players' physical fitness [3,5,22]. Tests such as the 20m run with a high start, T-shaped running test, Suicides Drill, and defensive slides not only reflect physical capacity but also resemble the types of movements frequently seen in competition. Meanwhile, dribbling according to a pattern and passing the ball for 30 seconds increase specificity by combining physical fitness requirements with ball

handling. This aligns with the view that the assessment of specialized fitness should be linked to the movement structure of the sport [13,23].

Three tests: 2-point shots in 1 minute, 3-point shots in 1 minute, and 30 free throws represent the basic scoring methods in basketball. The simultaneous selection of these tests allows for the evaluation of shooting effectiveness under different requirements of distance, time, and technical stability. The results are consistent with domestic studies that have emphasized the role of physical fitness, speed strength, and the organization of specialized training in the effectiveness of basketball shooting technique [6–8,17]. Therefore, combining specialized physical fitness tests with basketball shooting tests helps the evaluation system better reflect the athlete's overall ability structure rather than just considering each quality individually.

Notably, all 10 tests achieved reliability through retesting after 7 days, with a correlation coefficient $r = 0.803–0.933$, $p < 0.01$. This result shows that the tests have the necessary stability when applied to the studied athlete group and meet the reliability requirements of sports measurement tools [2,9,10]. However, reliability only reflects the stability of the measurement, which is not sufficient to fully affirm the value of a test. Therefore, subsequent studies should continue to validate the criterion validity, discriminant validity, and sensitivity of the test system on a larger sample of athletes.

In general, the system of 10 tests was selected to both inherit research results from both domestic and international sources and to be filtered according to the practical characteristics of the team. This is the initial basis for assessing specialized physical fitness and shooting effectiveness, monitoring changes in training levels, and supporting the adjustment of training programs for the female basketball team at Saigon University of Technology.

5. Conclusions

The study has selected 10 appropriate tests to evaluate the specialized physical fitness and shooting effectiveness of the female athletes of the Saigon University of Technology basketball team, including 7 specialized physical fitness tests and 3 shooting tests. The tests were selected through a literature review, two rounds of expert interviews, and reliability testing. The results of the retest show that all 10 tests achieved reliability with $r = 0.803–0.933$ ($p < 0.01$), indicating stability and practical applicability.

Conflict of Interest Statement

The authors declare no conflicts of interest.

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