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Assessment of Basic Basketball Skills among Students Participating in a High School Basketball Extracurricular Program

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Abstrac: This study aimed to determine the level of basic basketball skills among students participating in the basketball extracurricular program at SMA Negeri 7 Padang. This research employed a quantitative descriptive design using a survey method. The population consisted of 20 male students participating in the basketball extracurricular program, and all participants were selected as the sample using the total sampling technique. Data were collected using the AAHPERD Basketball Test, which measures *dribbling*, *shooting*, and *passing* skills. The data were analyzed using descriptive statistics. The results showed that the average *dribbling* score was 21.71 seconds, the average *shooting* score was 32, the average *passing* score was 70, and the overall basic basketball skill T-score averaged 50. Overall, the participants' basic basketball skills were classified as moderate (fair). These findings indicate the need for more structured training programs and adequate sports facilities to improve students' basketball skills.

Keyword: Assessment, Basketball, Basic Skills, Extracurricular Program

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INTRODUCTION

Education is a fundamental need that plays an essential role in developing individuals' potential and shaping their character (Masrun et al., 2023). One of the primary means of achieving this objective is through physical education, which encompasses health, physical fitness, motor skills, cognitive development, and moral values. Physical education is not only concerned with improving physical abilities but also serves as a learning process through movement, enabling students to learn both to move and through movement (Munandar, 2021). In addition, students' learning motivation is an important factor in achieving successful physical education outcomes and encouraging active participation in sports activities (Rozi et al., 2023).

Sports are an integral component of physical education that utilize physical activity to improve and maintain health (Adiningtyas, W. P., Tomi, A., & Yudasmara, 2020). In Indonesia, the importance of sports development is emphasized in Law No. 11 of 2022 concerning the National Sports System, in which basketball is recognized as one of the priority sports for athlete development. Basketball is widely played by children, adolescents, and adults, making it one of the most popular team sports worldwide. Besides promoting physical fitness and health, basketball also aims to develop athletic achievement through systematic coaching and competition (Adelia et al., 2021). To achieve optimal performance, players are required to master fundamental technical skills, including dribbling, passing, shooting, rebounding, and lay-ups (Efendi, 2017). These technical abilities must be supported by good physical condition as well as psychological factors, particularly self-confidence, which significantly influences athletes' performance during competition (Purnomo et al., 2020).

Mastery of fundamental basketball skills has become an important concern in sports coaching because it directly affects individual and team performance. Previous studies have demonstrated that basketball performance depends not only on physical fitness but also on technical proficiency developed through systematic training. Efendi (2017) emphasized that mastery of fundamental techniques is the foundation for achieving optimal basketball performance. Similarly, Mariati (2023) found that appropriate training methods, including distributed practice and massed practice, significantly improve basketball skills, particularly free-throw performance. Furthermore, Quílez Maimón et al. (2020) reported that technical skills constitute one of the most important performance indicators in basketball because they directly influence offensive effectiveness and game outcomes. These findings indicate that evaluating players' technical abilities is essential for designing effective coaching and training programs.

Despite the growing body of research on basketball performance, previous studies have predominantly focused on training interventions, specific technical skills, or competitive athletes. Limited attention has been given to describing the overall level of fundamental basketball skills among students participating in school extracurricular programs, particularly at the senior high school level in Indonesia. Moreover, studies examining the technical abilities of basketball extracurricular participants in West Sumatra remain scarce. As a result, coaches often lack objective information regarding students' strengths and weaknesses in fundamental skills, making it difficult to develop evidence-based training programs that meet students' actual needs.

This research gap highlights the importance of assessing students' fundamental basketball skills within the context of extracurricular sports activities. A comprehensive evaluation of students' technical abilities can provide valuable information for coaches in designing more effective training programs, monitoring players' development, and improving team performance. In addition, the findings are expected to contribute to the development of extracurricular sports coaching in schools by providing empirical evidence that can support decision-making in athlete development and talent identification.

Padang State High School 7 is one of the schools committed to developing students' potential, including through basketball extracurricular activities. Considering that basketball involves relatively complex rules and technical skills, students are encouraged to continuously improve their abilities through structured training programs. Basketball extracurricular activities provide students with opportunities to develop their interests, talents, creativity, and athletic potential while simultaneously fostering discipline, teamwork, and character development (Iskandar et al., 2026). These activities are conducted outside regular school hours,

allowing students to develop their sporting abilities without interfering with academic responsibilities.

Based on preliminary observations, 30 students participated in the basketball extracurricular program at Padang State High School 7 in 2025. Interviews with the extracurricular coach revealed several challenges affecting the training process, including the poor condition of the basketball court and the limited availability of training equipment, such as basketballs and cones. These limitations have the potential to reduce training effectiveness and hinder students' mastery of fundamental basketball skills.

Nevertheless, basketball extracurricular activities are conducted regularly every Thursday and Friday, with additional training sessions on Saturdays to prepare the school's representative team for various competitions. The Padang State High School 7 (SAMANJU) basketball team actively participates in several basketball tournaments held in Padang. However, the team's competitive achievements have not yet reached the expected level, indicating the need for a more comprehensive evaluation of students' technical abilities as the basis for improving coaching quality.

Therefore, this study aims to analyze the level of fundamental basketball skills among students participating in the basketball extracurricular program at Padang State High School 7. Unlike previous studies that primarily focused on the effectiveness of training methods or specific technical skills, this study provides a comprehensive profile of students' fundamental basketball abilities in the context of a senior high school extracurricular program. The findings are expected to provide empirical evidence for coaches and schools in evaluating existing coaching programs, designing evidence-based training strategies, and improving students' performance in future competitions.

METHOD

Research Design

This study employed a quantitative descriptive research design using a survey method to determine the level of fundamental basketball skills among students participating in the basketball extracurricular program at SMA Negeri 7 Padang. A quantitative descriptive approach is appropriate for describing the characteristics of a population based on observed data without manipulating research variables (Creswell & Creswell, 2023). The study was conducted at SMA Negeri 7 Padang, West Sumatra, Indonesia, during the 2025 academic year.

Participants

The population consisted of 20 male students who actively participated in the basketball extracurricular program at SMA Negeri 7 Padang. Because the population comprised fewer than 100 participants, all members of the population were included as research participants using the total sampling technique. Consequently, the sample size was identical to the population, consisting of 20 students.

Instrument

Data were collected using the AAHPERD Basketball Skill Test (American Alliance for Health, Physical Education, Recreation and Dance), a standardized instrument commonly used to assess fundamental basketball skills. The test has reported validity coefficients ranging from 0.65 to 0.95 and reliability coefficients ranging from 0.84 to 0.97. The instrument evaluated three fundamental basketball skills: speed spot shooting, passing, and control dribbling, which are recognized as essential indicators of basketball technical performance (Gál-Pottyondy et al., 2021).

Data Collection

Data collection was conducted during the scheduled basketball extracurricular practice sessions at SMA Negeri 7 Padang. Before testing, participants received instructions and demonstrations regarding the testing procedures. Each participant performed three trials for each test item. The first trial was used as a familiarization or practice trial, whereas the second and third trials were recorded and used to calculate the participants' final scores. All testing

procedures were conducted under the supervision of the researcher and the extracurricular basketball coach to ensure consistency and accuracy in data collection.

Data Analysis

The collected data were analyzed using descriptive statistical techniques. Descriptive statistics, including frequency, percentage, mean, and standard deviation, were calculated to describe the level of students' fundamental basketball skills. The results were subsequently classified into predetermined performance categories to facilitate interpretation and provide an overview of the participants' basketball skill levels.

RESULT

Descriptive Data Analysis

1. Dribbling

Table 1. Dribbling Frequency Distribution

Interval Class	Absolute Frequency	Relative Frequency	Category
≤17,91	1	5,00	Very Good
20,44 – 17,92	5	25,00	Good
22,97 – 20,45	8	40,00	Fair
25,50 – 22,98	3	15,00	Poor
≥ 25,51	3	15,00	Very Poor
Total	**20**	**100**	

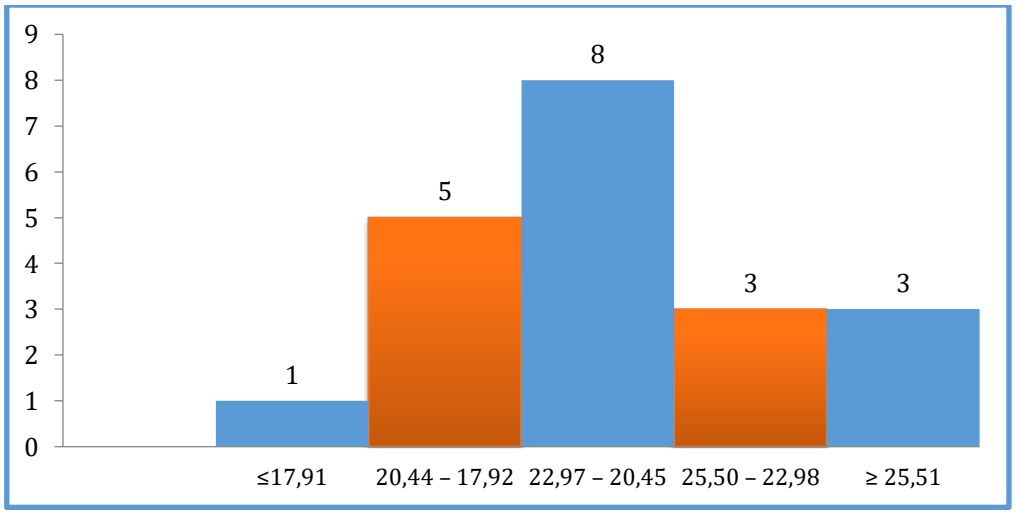

Figure 1. Dribbling Histogram

The dribbling test results showed an average time of 21.71 seconds, with the fastest time at 17.70 seconds, the slowest at 26.34 seconds, and a standard deviation of 2.53. Based on Table 2, most students fell into the “fair” category (8 students, 40.00%), followed by the “good” category (5 students, 25.00%), the “poor” and “very poor” categories (3 students each, 15.00%), and the “excellent” category (1 student, 5.00%). These results indicate that the dribbling skills of students participating in the basketball extracurricular program at SMA Negeri 7 Padang are generally in the “fair” category.

2. *Shooting*

Table 2. Shooting Frequency Distribution

Interval Class	Absolute Frequency	Relative Frequency	Category
≥ 42	3	15,00	Very Good
35 – 41	3	15,00	Good
28 – 34	7	35,00	Fair
21 – 27	6	30,00	Poor
≤ 20	1	5,00	Very Poor
Total	**20**	**100**	

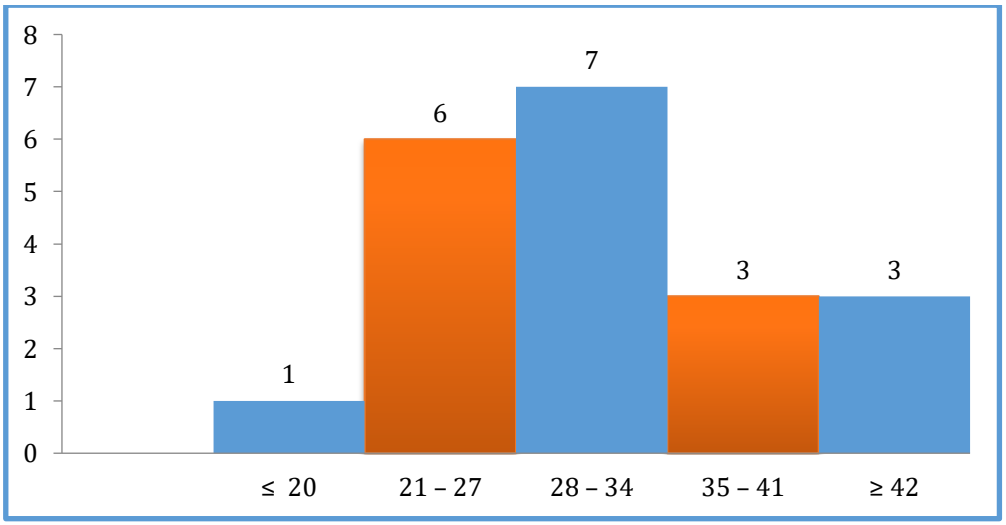

Figure 2. Shooting Histogram

The shooting test results showed an average score of 32.00, with a highest score of 44, a lowest score of 19, and a standard deviation of 7.04. Based on Table 3, most students fell into the "fair" category (7 students, 35.00%), followed by the "poor" category (6 students, 30.00%), the "good" and "very good" categories (3 students each, 15.00%), and the "very poor" category (1 student, 5.00%). These results indicate that the shooting ability of students participating in the basketball extracurricular program at SMA Negeri 7 Padang is generally in the "fair" category.

3. *Passing*

Table 3. Passing Frequency Distribution

Interval Class	Absolute Frequency	Relative Frequency	Category
≥ 91	2	10,00	Very Good
77 – 90	4	20,00	Good
63– 76	8	40,00	Fair
50 – 62	5	25,00	Poor
≤ 49	1	5,00	Very Poor
Total	**20**	**100**	

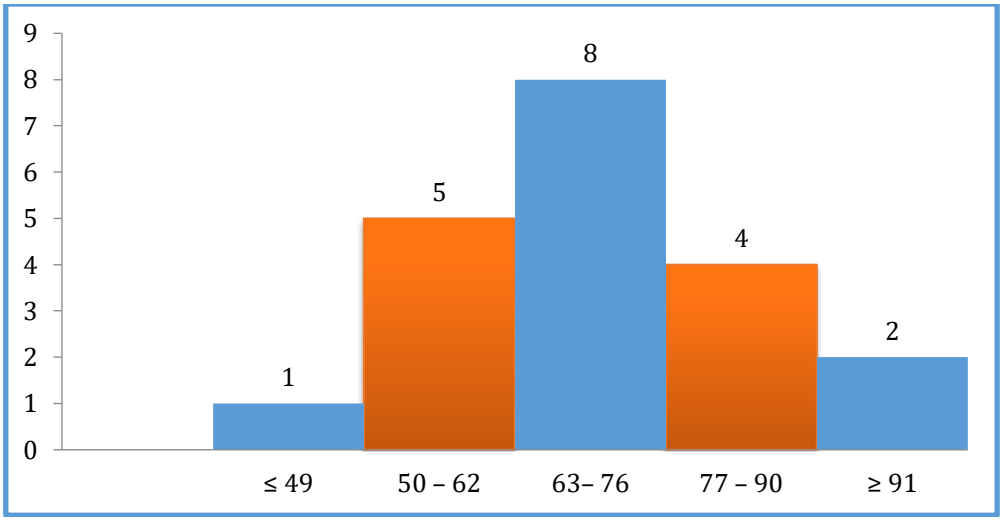

Figure 3. Passing Histogram

The passing test results indicate that the majority of students participating in the basketball extracurricular program at SMA Negeri 7 Padang demonstrated fair passing skills. As presented in Table 3, 8 students (40.00%) were classified in the fair category, followed by 5 students (25.00%) in the poor category, 4 students (20.00%) in the good category, 2 students (10.00%) in the very good category, and 1 student (5.00%) in the very poor category. These findings indicate that the overall passing ability of the students is generally at a fair level, suggesting that while most students have acquired the basic passing technique, further training is needed to improve the accuracy, speed, and consistency of their passing performance during game situations.

4. Basic Basketball Skills

Table 4. Frequency Distribution of Basic Basketball Skills

Interval Class	Absolute Frequency	Relative Frequency	Category
≥ 62	2	10,00	Very Good
54 – 61	5	25,00	Good
46 – 53	7	35,00	Fair
38 – 45	5	25,00	Poor
≤ 37	1	5,00	Very Poor
Total	**20**	**100**	

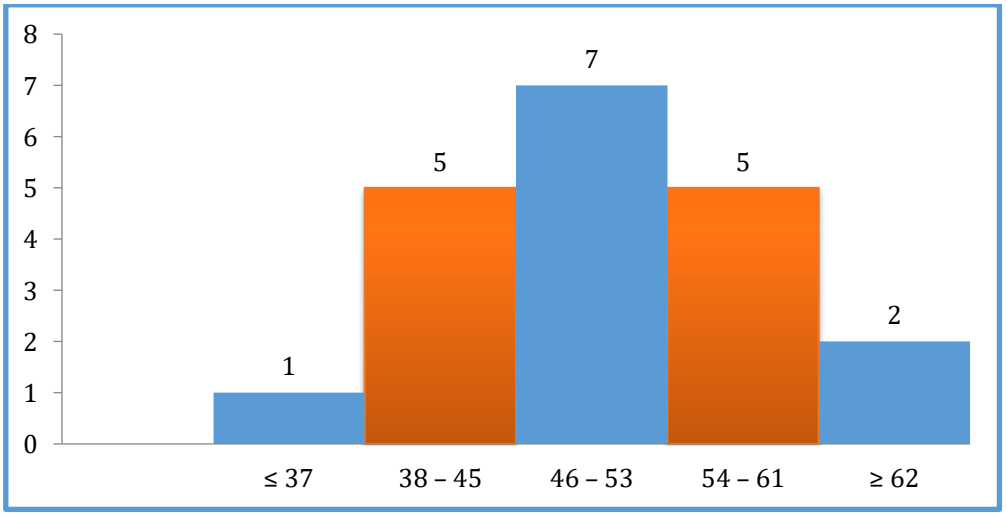

Figure 4. Basic Basketball Skills Histogram

The results for basic basketball skills based on the T-score show an average score of 50, with a highest score of 65, a lowest score of 35, and a standard deviation of 7.72. The frequency distribution of basic basketball skills is presented in Table 5. Based on the table, the majority of students fell into the "fair" category, totaling 7 students (35.00%), followed by the "good" and "poor" categories with 5 students each (25.00%), the "very good" category with 2 students (10.00%), and the "very poor" category with 1 student (5.00%). These findings indicate that the level of basic basketball skills among students participating in the basketball extracurricular program at SMA Negeri 7 Padang is generally in the "fair" category.

DISCUSSION

The findings of this study indicate that the overall basic basketball skills of students participating in the basketball extracurricular program at SMA Negeri 7 Padang are generally at a fair level. This pattern is consistently reflected across the three fundamental technical skills assessed dribbling, shooting, and passing where most students were classified in the fair category. These results suggest that although students have acquired the basic techniques required to play basketball, their technical proficiency has not yet reached an optimal level for consistent game performance.

One possible explanation for this finding is the limited frequency and duration of training sessions. The development of basketball skills requires continuous, systematic, and progressive practice because fundamental techniques become more effective only after repeated execution in various game situations. Players who receive regular technical training tend to demonstrate better ball control, coordination, and decision-making than those with less structured practice (Suprapto et al., 2023). Consequently, extracurricular programs conducted only once or twice a week may not provide sufficient practice volume to develop technical skills to a high level.

The quality of coaching may also contribute to the moderate skill level observed in this study. Effective basketball coaching involves not only teaching technical movements but also providing appropriate demonstrations, corrective feedback, and progressive training programs that match students' developmental stages. Coaches who consistently apply varied drills and game-based learning approaches can improve players' technical mastery, confidence, and tactical understanding. Without systematic instruction and regular performance evaluation, students may continue to repeat technical errors, resulting in only moderate improvements in performance.

The availability of facilities and equipment is another important factor affecting skill development. Adequate courts, basketballs, hoops, and training equipment enable students to practice more effectively and increase the number of repetitions performed during each training session. Previous studies have shown that appropriate sports facilities positively influence students' technical skill development because they support more effective learning experiences and improve training quality (Devayani et al., 2024). Conversely, limited facilities reduce opportunities for individual practice and may slow the acquisition of fundamental basketball techniques.

The moderate level of dribbling skills found in this study may also be explained by deficiencies in ball control and dribbling technique. Many novice players tend to dribble the ball too high, making it more difficult to maintain possession and increasing the likelihood of losing the ball during competitive situations. Low, controlled dribbling is more effective for protecting the ball from defenders and improving maneuverability (Taufik et al., 2026). Furthermore, ball control is considered one of the essential technical components contributing to successful basketball performance (Gou & Li, 2025). These findings suggest that greater emphasis should be placed on progressive dribbling drills that combine speed, control, and directional changes.

Similarly, the moderate shooting performance observed among students indicates that shooting accuracy remains a challenge. Successful shooting depends not only on mastering proper shooting mechanics but also on physical coordination, balance, concentration, and repeated practice under various conditions. Shooting performance is influenced by technical execution, physical fitness, psychological readiness, and environmental factors (Amaro et al.,

2025). Therefore, improving shooting ability requires structured practice emphasizing correct body alignment, release technique, and repeated shooting from different positions on the court.

Passing ability also remained at a fair level, indicating that students still need to improve passing accuracy and consistency. Effective passing requires proper body positioning, relaxed hand movements, appropriate force application, and good communication with teammates. In basketball, accurate passing facilitates offensive movement and creates better scoring opportunities. Previous studies have also reported that passing performance improves through appropriate instructional methods supported by adequate training facilities (Devayani et al., 2024). Consequently, passing drills should focus not only on technical accuracy but also on decision-making and game-like situations.

The findings of this study are generally consistent with previous national studies reporting that the basic basketball skills of high school students participating in extracurricular programs tend to fall within the moderate or fair category, indicating that technical mastery remains a common challenge among student athletes. International research likewise emphasizes that adolescents require structured long-term training programs, qualified coaching, and adequate learning environments to achieve higher levels of technical proficiency. This suggests that the moderate performance observed in the present study reflects challenges commonly experienced in school-based basketball development programs rather than being unique to SMA Negeri 7 Padang.

Considering that the participants are adolescents, this stage represents an important period for developing motor skills and sport-specific techniques. Appropriate coaching interventions implemented during this developmental phase can significantly improve technical competence and prepare students for higher levels of competition. Therefore, schools should strengthen extracurricular basketball programs by increasing training frequency, implementing progressive skill-development programs, improving coaching quality, and providing adequate facilities and equipment. These efforts are expected to enhance students' mastery of fundamental basketball skills and ultimately improve their overall performance in competitive play.

CONCLUSION

This study concludes that the basic basketball skills of students participating in the basketball extracurricular program at SMA Negeri 7 Padang are generally at a fair level, indicating that further improvement is needed in mastering fundamental techniques. These findings contribute to the literature by providing empirical evidence on the current level of basketball skills among Indonesian high school students and emphasize the importance of structured and continuous training during adolescence. Practically, the results suggest that schools and coaches should implement progressive training programs supported by qualified coaching and adequate facilities to enhance students' technical performance.

This study is limited by its relatively small sample drawn from a single school and its focus solely on basic technical skills. Therefore, future studies are recommended to involve larger and more diverse samples, include additional variables such as physical fitness, psychological factors, and training experience, and employ experimental or longitudinal designs to examine the effectiveness of different training programs in improving basketball skills.

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