



Analysis of Technical Abilities And Physical Condition for Women's Basketball Athletes of Bandung

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Info Artikel

Article History:

Received 10 June 2022

Approved 20 October 2022

Published 27 October 2022

Keywords:

Technical Skills;
Physical Condition;
Basketball;
Performance

Abstract

Several factors, such as the readiness of technical abilities and physical condition, are essential to basketball athletes' development and achievement. This research aims to describe the results of analyzing female basketball athletes' technical skills and physical condition. The method used in this research is a descriptive method using a quantitative approach with a correlational type of research to examine the relationship between technical abilities and physical condition variables on performance. This research was conducted in 2022 with the population of female basketball athletes of Bandung who will compete in the multievent PORPROV basketball Game in 2022. The instrument in this research used five technical skill test items, namely the passing skill test; shooting skills test; Under-ring test; lay-up skills; Illinois Agility Dribbling Test, and seven physical condition test items, namely the Wall Sit Test (Limb Muscle Endurance); 20-meter Sprint Test (Speed); Illinois Agility Test, Vertical Jump Test, Bleep Test, Flexibility Test. In the Pearson correlation output, there is a correlation that shows the relationship between skill technique and physical condition with the performance of Bandung women's basketball players, with a significant contribution from technical abilities and physical condition to the player's performance was 48.2%.

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INTRODUCTION

Sport is a series of activities carried out regularly and planned to increase the ability to move or improve the quality of life and maintain motion or maintain life (Physical,

2017). A sport that looks for achievements is carried out by everyone who has the talent, ability and potential to achieve the achievement targets that have been set. The achievement of basketball in Indonesia must

be supported by planned, tiered and sustainable with the support of science and technology (IPTEK). Several recent studies have analyzed the importance of team or team sports training for achieving favourable outcomes in sports, for example, basketball (Gómez-Haro; Salmerón-gómez, 2015.) The sport of basketball is played in teams and relies on the collectivity and cohesiveness of athletes. In one team, as described in the rules of the game, basketball is played by two teams, each consisting of five players. Each team tries to put the ball into the opponent's basket, which prevents the opposing team from entering the ball or scoring. The ball may be passed, thrown, tapped, rolled or dribbled in any direction by the rules. (FIBA, 2020).

Two factors can affect the achievement and performance of basketball players; these factors are internal factors and external factors. Internal factors arise within the athlete, such as physical conditions, techniques, tactics, and mental (psychic). In contrast, external factors, such as facilities and infrastructure, coaches, family, organization, funds, and climate, come from outside the athlete. Nutritious food and many others (Fanani et al., n.d.). Another thing revealed that systematic, repeated and measurable training and applying aspects of training include physical, technical, tactical and mental exercises that can help athletes improve skills and good performance (Harsono, 2017).

Basketball is a sport that requires good coordination, a good level of physical condition, and good individual skills. In basketball, mastery of individual playing skills is a skill that every basketball player must have. One of the characteristics of competitive basketball is that each opposing team puts the ball into the opponent's basket and tries to keep the basket to prevent the opponent from scoring. Oliver J (2007) states that shooting, dribbling, rebounding and teamwork in attack and defence are prerequisites for successful basketball. The same thing was said (Kusuma & Kristiyanto, 2017) that "To be a good player, it is necessary to master the basics (basics, techniques and strategies) of the game of basketball." Every basketball player must master individual skills such as shooting, passing, dribbling and rebounding, and offensive or defensive teamwork, which are prerequisites for a successful sport (Bazanov & Haljand, 2017). Teams can win the game depending on their skills, such as passing, shooting, dribbling, rebounding, team collaboration, etc. (Csataljay, Donoghue, Hughes; Dancs, 2017). In addition to technical skills, basketball is a game that requires physical readiness.

Athletes with the good physical condition will be faster in mastering and improving their technical abilities (Harsono, 2007). Physical conditions are defined as physical conditions. This state before (initial ability), during, and after experiencing the training process. What is meant by the

physical condition is the ability which includes flexibility, balance, arm and abdominal muscle endurance, explosive power, and cardiac endurance (VO2Max) (Misfajar & Sulistyorini, 2009). To make basketball players excel and have maximum performance, it must start with the coaching process and training patterns for athletes with good physical conditions. They are referring to the concept of Long Term Athlete Development (LTAD) and looking at the characteristics of basketball games that require physical conditions such as running fast, stopping suddenly, throwing, and catching (Carvalho et al., 2011). The dominant physical components used in basketball games are strength, agility, and endurance because they are physically very demanding, requiring players to permanently repeat attacks of intense action (running, dragging, jumping) with jogging, walking, or short recovery periods (Abdelkrim, 2007). The prevailing physical conditions that every basketball athlete must have are speed, endurance, strength, coordination, and flexibility.

Meanwhile, according to (Ilham, F., Sin, H, T., and Yenes, R, 2019), the five prevailing physical conditions above are added to explosive power and agility. Basketball is also a constantly changing tempo, requiring the application of fast and explosive basketball techniques such as rebounds, drives, lay-ups, jump-shoots, blocks, short breaks and high-speed games involving both aerobic and anaerobic energy

processes. (Maud, 2006). In addition, the ability to run while dribbling the ball, passing the ball to his teammates, grabbing the ball and putting the ball into the opponent's ring are physical, technical, cognitive and cooperative (social) abilities that must be possessed by basketball players in order to win a match (Csataljay, Donoghue). (Hughes & Dancs, 2017) This requires a coach to know and analyze the technical abilities and physical condition of his athletes to achieve good performance in every event/match that will be followed, one of which is the 2022 Pekan Olahraga Provinsi (PORPROV).

METHODS

The population used in this study is the female basketball athletes of Bandung who will compete in PORPROV 2022, totalling 12-15 athletes, using a saturated sampling technique where all members of the population are used as samples.

The inclusion criteria in this study (1) were female basketball athletes with a range of the age group of 16 to 20 years recorded in the Bandung City basketball team for PORPROV 2022, (2) Athletes who took part in this study had obtained parental consent by signing the consent form.

The exclusion criteria in this study are:

1. Women's basketball athletes who still need to register in the Bandung City basketball team for PORPROV 2022.
2. Not be the subject of research.

The research used a descriptive method

using a quantitative approach with a correlational type of research to examine the relationship between the variables of technical abilities and physical condition on the performance results of the players using the *Pearson correlation test* on the SPSS 26. The instruments used in this study were five technical skill test items: a skill test for throwing a ball (passing), a shooting skill test, an Under-ring test, a lay-up skill, Illinois Agility Dribbling test. Each athlete will do each item of the basketball technique test 2 times, and the best result will be taken. Then seven physical condition test items, namely the Wall Sit Test (Limb Muscle Endurance), 20-meter Sprint Test (Speed), Illinois Agility Test (Agility), Vertical Jump Test (Limb Muscle Explosive Power), Bleep Test (Speed Endurance), Flexibility Test (Flexibility). Each athlete will take measurements of each item of

the physical condition test in turn, and the results will be recorded, as well as the results of the data taken from the results of the FIBA Live Stats statistical application from the PORPROV Women's Basketball team of Bandung to see the performance results.

FINDING AND DISCUSSION

Finding

Based on the data collected from 13 independent variables, namely technical abilities and physical condition, and the dependent variable performance of female basketball athletes of Bandung who competed in the qualification round of the West Java Provincial Sports Week (Porprov) in 2022. There are 13 female basketball athletes, with the distribution of player positions shown in Figure 1 below.

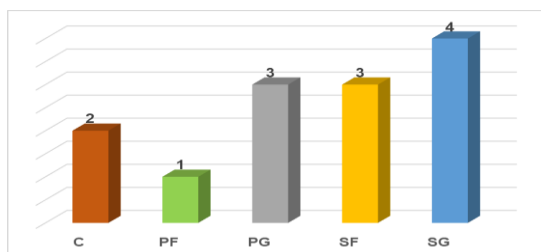


Figure 1. Distribution of Player Positions

Meanwhile, based on the age of the female basketball athletes in Bandung is shown in Figure 2 below. Based on the sample age data shown in Figure 2, it shows that the

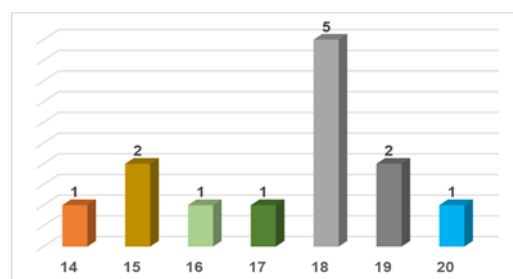


Figure 2. Age Distribution of Players

age of the female basketball athletes of Bandung ranges from 14 to 20 years. The most dominant age is 18, with as many as five players.

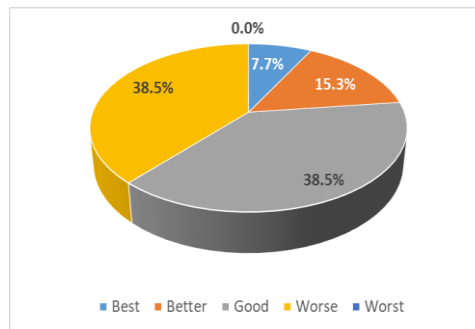


Figure 3. Performance Distribution chart of Women's Basketball Players in Bandung City

By using the combined performance data and referring to the categories in table 10, the distribution of the performance of women's basketball players in the city of Bandung shows that the highest distribution is in the Good and Worse categories, which both get a percentage of 38.5% or as many as five players. As for the Best category, only 7.7% or one player. In the Better category, there were two players or 15.3%.

Discussion

We try to reveal the results of the analysis of the technical abilities and physical condition of the female basketball athletes of Bandung who will compete in the PORPROV multievent event in 2022. From the results of the analysis of the age of the sample, female basketball athletes in Bandung are at the age level of 14 to 20 years, and the Dominant Age is 18 years old with five players; after that, it is divided into five categories, namely Best, Better, Good, Worse and Worst in each item of technical abilities and physical condition.

This research reveals that technical skill and physical condition variables have a linear relationship with the athlete's performance. From the analysis of the correlation test of

technical abilities and physical condition with the performance of players, it was found that both had a significant relationship with the performance of women's basketball athletes in Bandung.

Technical abilities possessed by a basketball player are essential in the training process until the match that will be faced. The ability to master fundamental technical skills makes it easier in any game or competition. You will develop a skill in a basketball game if you can accurately and adequately execute basic techniques (Nurrochmah & Yusuf, 2021). In basketball, several basic techniques must be mastered: passing, dribbling, shooting, pivoting, lay-up, and rebounding (Marić, Katić, and Jelčić 2013). This finding is supported by the research results of (Altavilla & Raiola, 2014), who suggested that in every basketball game movement, both attackers and defenders will never have certainty as for the opponent's mode of action, the choice is always defensive, and the opponent's movement will always determine offensive. Mastering basic technical abilities is essential for all players, along with tactical skills, to improve playing performance to run well. (Erčulj, Blas, & Bračić, 2010).

In addition to technical skills, basketball is a game that requires good physical condition readiness for every athlete on a team. Studies from (Nasution, Nirwandi, Neldi & Hardiansyah, 2022) suggested that Physical condition, fundamental technical and tactical knowledge, and a healthy mental attitude are requirements to improve performance. A person's physical condition is one of several factors influencing his success. With a field size of 28 x 15 meters, played by ten people in the field, and with a duration of 4 x 10 minutes plus 5 minutes of overtime, if the same score occurs after 4 x 10 minutes, this basketball game is required to be able to maintain abilities and skills effectively. Consistent throughout the game (Erawan, 2016). This finding is supported by the research results of Liu & Wang (2021). Athletes must be physically healthy if they want to employ their exceptional skills flexibly during play. Athletes need to be physically fit to play for an extended period. Research from (Khalili Moghaddam & Lowe, 2019) explains that elements of physical condition that have an essential role in basketball games are elements of agility, speed, and explosive power of arm muscles. Bola basket is an intermittent sport that requires explosive play, such as quick and smooth changes in speed and direction of the arc of the field (McInnes, Carlson, Jones, and McKenna, 1995). In the most recent article, it was also said that the new basketball rules would increase the number of explosive acts during games (Cormery, Marcil, and Bouvard, 2008). To score basketball players who excel

optimally, it must start from the coaching process and training patterns for athletes with good physical conditions. His research (Taylor et al., 2015) revealed that every player must have the excellent physical condition so that throughout the game, all players can play with skill and full of sincerity. Athletes with the good physical condition will be faster in mastering and improving their technical abilities (Harsono, 2007).

Achieving good athlete performance requires applying sound and correct methods, models, and training approaches. Systematic, repeated and measurable training and applying aspects of training, including physical, technical, tactical and mental exercises, can help athletes improve their skills and performance. Therefore, technical abilities and physical conditions are essential in achieving athlete performance.

CONCLUSION

The conclusion from the research that has been done is that there is a linear relationship between technical skills and the physical condition of each athlete's performance in the Bandung women's basketball team. Together, technical skills and physical condition have a significant relationship with the performance of women's basketball athletes of Bandung, with the amount of the contribution that is contributed jointly by 48.2%. In comparison, the remaining 51.8% is influenced by other factors. This shows that technical Abilities and

physical conditions each have a role in achieving the performance of women's basketball athletes in Bandung.

Hopefully, this research can be used as a consideration for the Bandung City women's basketball coaching staff and athlete team who will compete in the PORPROV multievent event in 2022 to get better performance and match results.

ACKNOWLEDGMENT

We thank the Institute for Research and Community Service (LPPM) Universitas Pendidikan Indonesia for supporting and funding this research.

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