

## Mental Imagery And Performance Improvement Of Basketball Athletes In The 16-18 Year Age Group

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**Abstract:** The purpose of this study was to determine whether there was a relationship between mental imagery and performance improvement of basketball athletes in the 16-18 year age group. This study used quantitative research methods. The research sample consisted of 30 basketball athletes in the Cirebon area using the purposive sampling technique. The research instrument used mental imagery training and an athlete's performance improvement scale developed according to the needs. The result showed the value  $r$  count for correlation Mental Imagery with Athlete's performance improvement was  $0.853 > r$  table  $0.361$ . So it could be concluded that there correlation between mental imagery with Basketball athlete's performance improvement in the 16 until 18 year age group. The result suggests that the higher the mental imagery, the higher the performance improvement in basketball athletes in the 16 until 18 year age group and vice versa.

**Keywords:** Athlete Performance Improvement, Basketball Athlete, Mental Imagery.

### 1. Introduction

The basketball game is a game played by two teams, each team consisting of five players. In the basketball game, every player has to think fast, have good communication, and build good teamwork. The aim of the game is to enter the ball into the opponent's ring, and vice versa, so that the opponent does not enter the ball into our ring. There are five positions in basketball, namely: first position or point guard, second position or shooting guard, third position or small forward, fourth position or power forward, and position five or post/center. Of the five positions, each position has its duties and roles.

The basketball game is one of the big ball games that are so popular and much-loved in Indonesia. There are many groups or clubs based on the aged included professionals and communities that love basketball. This sport not only for health and pleasure but also as a sport to gain achievement. The division of levels in basketball generally starts from the age group of 10 years, 12 years, 14 years, 16 years, 18 years, and the pro elite.

Coaching in each age group has a significant role in obtaining better national basketball team achievements in the future. Therefore, in coaching the age group, all components must be intended in shaping the fundamental factors of basketball athletes, which include physical, technical, strategic, and mental conditions according to each age group. Most basketball coaches tend to train only physically, technically, and in strategy. However, one of the factors that need consideration in basketball training is mental training. Every athlete needs to have a good mental state. If an athlete does not have a good mental state during training or competition, it could possibly affect the physical, technical, and strategic abilities that previously had been trained. The component in athlete's environment has a role in improving the mental improvement of the athlete, such as coaches, parents, family, managers, teammates, even playmates. These components are important in mental training for athletes because environmental factors will support the athlete's psychology. For a trainer, not only practicing physical, technical, and strategy exercises, but there must be significant mental training in the training process.

The athletes must have a balance between physical and mental abilities to obtain a maximum and optimal performance. A good and healthy physical condition might not give a better result if good mental training did not include in the training process. This is because there is a rationale that reveals that the factors associated with successful performance to get optimal results in competition are closely related to the mental endurance of athletes (Komarudin, 2015).

Mental training has a significant function in producing maximum performance. The athlete who has a good mental state will deal with various disturbances and maintain their performance to focus and concentrate during the match. One of the techniques in mental training is mental imagery.

Imagery is one technique in mental training that must be mastered by the athlete. The term imagery indicates that an athlete must be able to imagine every movement in every match using imagination, in order to increase motivation, provide calm, learn the ability of the opponent, appear confident, and anticipate the worst situation in a match. Imagery training has benefits for athletes to imagine the experience of motion during training, which is then remembered in their brain so that during the match they can display the experience of the motion. Imagery training (mental imagery) is a form of mental training in the form of self-imagery and movement in the mind (Ari Setiatmoko, 2013). In accordance with Yukelson (Gunarsa, 2004) imagery is technique in mental training (mental rehearsal) which engages all the senses, thoughts, feelings, emotions and senses such as sight, hearing and the adrenaline hormone which creates experiences in the mind. Imagery training is a way to create and repeat experiences on the thoughts that are stored in memory and forming it into memory then arranging it in the form of movement.

The result of the researchers' observations during basketball athletes training and the result of video reviews during training and competition show that there were problems that affect the performance of basketball athletes, especially in mentality readiness of the athletes. These problems were : (1) the coach did not provide mental training in the training process; (2) the coach only prioritized physical strengthening training and mastery in technique and strategy rather than mental training; (3) improving athlete performance can be done by paying attention to mentality aspects; and (4) lack of knowledge about the importance of mental training.

As explained above, it is necessary to conduct the research on mental imagery and performance improvement of basketball athletes aged 16 until 18 years old. In this case, the researcher wants to know whether there is a relationship between mental imagery and performance improvement of basketball athletes in the 16 until 18 year age group during training or competition.

## 2. Research Methodology

This research was conducted in the Basketball Club in Region 3 Cirebon, West Java Province, Indonesia. This research was quantitative correlational research that aims to determine the relationship between mental imagery and performance improvement of basketball athletes in the 16-18 year age group. The population of this research was basketball athletes in the 16-18 year age group in Region 3 Cirebon. The number of samples in this study was 30 basketball athletes. The sampling technique used was purposive sampling. The purposive sampling is a sample taken according to considerations (Sugiyono, 2014). The sample considerations in this study were: (1) PORDA athletes aged 16-18 years old; (2) Having experience in competition at the provincial level; and (3) Mastering basic techniques and mental exercises. The instruments used in this study were mental imagery training that had been developed according to the needs and the scale of performance improvement of the athletes, in which included the result of training and competition of the athlete, processing, and use of information regarding the results of training and competition for basketball athletes aged 16-18 years that has been validated by experts. The data analysis technique used the Pearson Product Moment correlation test.

## 3. Results

The normality test by Kolmogorov-Smirnov showed that the significance value  $Asymp.Sig$  (2-tailed) between variables was 0.200, and this value is higher than 0.05. This result means that the assumption of the normality test was fulfilled, so it could be concluded that the data were normally distributed.

**Table 1.** Normality Test Results

| One-Sample Kolmogorov-Smirnov Test |                |                         |
|------------------------------------|----------------|-------------------------|
|                                    |                | Unstandardized Residual |
| N                                  |                | 30                      |
| Normal Parameters <sup>a,b</sup>   | Mean           | .0000000                |
|                                    | Std. Deviation | 5.01919291              |
| Most Extreme Differences           | Absolute       | .125                    |
|                                    | Positive       | .125                    |
|                                    | Negative       | -.118                   |
| Test Statistic                     |                | .125                    |
| Asymp. Sig. (2-tailed)             |                | .200 <sup>c,d</sup>     |

|  |
|--|
| a. Test distribution is Normal.                    |
| b. Calculated from data.                           |
| c. Lilliefors Significance Correction.             |
| d. This is a lower bound of the true significance. |

Meanwhile, the homogeneity testing showed that the value Sig. Based on Mean for Mental Imagery and Athlete’s performance improvement variable was  $0.865 > 0.05$ . So it could be concluded that the variance Mental Imagery and Athlete’s performance improvement variable was is homogeneous.

**Table 2.** Homogeneity Test Results

| Test of Homogeneity of Variances                     |                                      |                  |     |        |      |
|--|--------------------------------------|------------------|-----|--------|------|
|  |                                      | Levene Statistic | df1 | df2    | Sig. |
| Mental Imagery and Athlete’s performance improvement | Based on Mean                        | .029             | 1   | 58     | .865 |
|  | Based on Median                      | .129             | 1   | 58     | .721 |
|  | Based on Median and with adjusted df | .129             | 1   | 56.069 | .721 |
|  | Based on trimmed mean                | .015             | 1   | 58     | .904 |

Then the test results correlations bivariate pearsonthat the significance valueAsymp. Sig (2-tailed) between Mental Imagery and Athlete’s performance improvement was  $0.000 < 0.05$ , which means there is a significant correlation between Mental Imagery with Athlete’s performance improvement variables. Then the value r count for correlation Mental Imagery and Athlete’s performance improvement was  $0.853 > r$  table  $0.361$ . So it could be concluded that there correlation between Mental Imagery with Athlete’s performance improvement variables.

**Table 3.** Correlations Bivariate Pearson Test Results

| Correlations                      |                     |                |                                   |
|-----------------------------------|---------------------|----------------|-----------------------------------|
|                                   |                     | Mental Imagery | Athlete’s performance improvement |
| Mental Imagery                    | Pearson Correlation | 1              | .853**                            |
|                                   | Sig. (2-tailed)     |                | .000                              |
|                                   | N                   | 30             | 30                                |
| Athlete’s performance improvement | Pearson Correlation | .853**         | 1                                 |
|                                   | Sig. (2-tailed)     | .000           |                                   |
|                                   | N                   | 30             | 30                                |

\*\* . Correlation is significant at the 0.01 level (2-tailed).

**4. Discussion**

As the results obtained above, this study showed a significant relationship between mental imagery and increased performance in basketball athletes in the 16-18 year age group. It means that H1 was accepted and H0 was rejected. Also, the relationship between mental imagery and performance improvement in basketball athletes aged 16-18 years old was positively correlated. The higher the mental imagery, the higher the performance improvement of the basketball athletes aged 16 -18 years old.

Several factors might affect the athletes' mentality during training and competition. These factors were preparation, coaching at the early childhood level, and competition. If the preparatory factor is properly trained,

the athlete will feel calm and comfortable, and in the competition, there will be an performance improvement of basketball athletes in the 16-18 year age group.

## 5. Conclusion

Based on the data obtained, the analysis, and discussion, it could be concluded that:

1. This study showed that there was a significant relationship between mental imagery and performance improvement of basketball athletes in the 16-18 year age group.
2. Through this research, the higher the mental imagery, the higher the performance improvement of basketball athletes in the 16-18 year age group, and vice versa.

**The mental aspect had an important role in improving the performance of athletes. The athletes might get the better achievement if mental training is added to the training process.**

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