

Leg Power in Relation to Rebounding Performance of Male Basketball Players

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Abstract. This study aimed to analyze the leg power related to the rebounding performance among selected male basketball players of zone 10 Barangay Bagong Silang Iligan City. The respondents of this study are 12 male players of the certain barangay. The finding showed that the majority of the players are aging 19 years old and has been playing basketball for 3-4 years. With regards to performance, the players with high leg power and high years in playing basketball have the greatest number of successful rebounds. It was found out that the correlation between their leg power and rebounding performance are not significant; also, the moderating variables interplayed between the dependent and independent variables. Based on the findings and conclusions, the following recommendations are derived: it is recommended that the future researches be done with more variables that will be considered as the determinants of basketball players in general. Finally, more depth studies are recommended on the influence of leg power in relation to rebounding performance on other male basketball players.

Keywords: Academic Performance, COVID-19 Perceived Stress, Undergraduate Students

1 Introduction

The majority of people believed that the human body was an unchangeable aspect of nature. They had a biological view of the body as opposed to a social and cultural one. But many experts and scientists today agree that unless we examine the body from a social and cultural viewpoint, we can never truly comprehend it. For instance, medical historians have lately demonstrated how many cultures and periods of history have described and classified the body and its various components in various ways. Additionally, they have demonstrated its significance by demonstrating how it influences social theories, government policies, medical practice, and everyday experiences of individuals. As for sports, 9 out of 10 males play basketball, women also practice and learn how to play. They claim that since they cannot see it as just a hobby, but it serves as their passion, activity and daily exercise, and even to waste their time on nothing else.

Basketball is a physical sport that calls for both strength and technique. Athletes of different ages and ability levels play. It can be practiced as a pick-up game or as an organized sport [1]. Dr. James Naismith created basketball in 1891 as an entertaining indoor game to be played in the winter. A leather soccer ball was tossed into two fruit baskets to begin the game. At Smith College, males were given permission to play sports, and the first women's sports regulations were put into place in 1903. In 1936, basketball made its debut as an Olympic sport. The jump shot has been one of the most important developments in basketball over the years. All recordings produced before 1950 were made with one foot on the ground. Five players participate in a traditional basketball game. The positions are center, forward, small forward, guard and guard. Athletes play! both attack and defense. Depending on a player's sport, they may play more than one position. It is common to see recreational games of one-on-one, two-on-two, or five-on-five in either half format [2].

The overall size of a high school basketball court is different than that of the collegiate and professional levels. High school courts are 50 feet by 84 feet, while college and professional courts are 50 feet by 94 feet. Usually rectangular in shape, the back wall is 72 inches wide by 48 inches high. A basketball hoop has a diameter of 18 inches and is suspended 10 feet in the air. Men's and women's balls are distinct in terms of weight and size. The ball for males has a diameter of 29 to 30 inches, weighs 20 to 22 ounces, and is inflated with 7 to 9 pounds of air. The ball is inflated with 6 to 8 pounds of air, has a diameter of 27 to 29 inches, and weighs 18 to 20 ounces for women. Children under the age of 12 may have lesser ball and hoop heights. The game may be played inside or outside. Typically, a leather composite ball is usually used indoors, and a rubber-based ball is used outdoors. The court construction can vary from suspended wood floors indoors to concrete and asphalt surfaces outdoors. The sport of basketball exposes the athlete to injury as a result of the running jumping, cutting, pivoting and explosive movements that occur during acceleration and deceleration [3].

The game begins with jump ball, where two players jump vertically to tip a tossed basketball toward a team for a possession, players on offense need to dribble, handle, pass and shoot the ball while maneuvering themselves for an offensive rebound. Players on defense need to be quick and powerful in order to jump and block a shot or elevate for a rebound and guard their opponents. Of the basic basketball skills, the rebound is one of the most important. Positioning, Anticipation and Sportsmanship Are Components of the Shot Once the player is in position and anticipates the direction of the ball for the shot, a vertical jump must be made. It requires balance, strength, power and reach. If possible, jumping should be done with two feet and two hands to increase control. Basketball is one of the sports played regularly by male players in Zone 10 of Barangay Bagong Silang, Iligan City. With this study, the researchers will try to determine the strength of the foot in relation to the performance of the retirement in selected basketball players from the listed position.

Statement of the Problem

This study sought to primarily find out the relationship of leg power to the rebounding performance of male basketball players. Specifically, this study is aiming to answer the following questions

1. What is the profile of the respondents in terms of

Age Height Weight Leg Power Number of years in playing basketball Rebounding Performance

2. Is there a significant relationship between leg power and the rebounding performance among the respondents?

3. How do the moderating variables such as height and weight interplay in the relationship between the independent variables and the dependent variables?

2.Methods

This chapter presents the following sections: research design, samples and sampling procedures, research instruments and data collection method.

2.1 Research Design

The descriptive co-relational method was used in this study [4]. The descriptive method aimed to describe the profile of the respondents such as the height and weight while the co-relational method derived into the extent of the leg power in relation to rebounding performance and used the person product moment coefficient of correlation and in testing the significant relationship between and among variables.

2.2 Research Instruments

The researchers of this study used the Sergeant Jump Test and the self-made Rebound test among selected basketball players in Zone 10 Brgy. Bagong Silang Iligan City as a main instrument to get their leg power in relation to rebounding performance. Another is an information sheet which was designed to gather necessary information from the players to determine their height and weight.

2.3 Sampling Procedures

The respondents of this study were male basketball players of Zone 10 Barangay Bagong Silang Iligan City. There are 2 teams and 6 players in each team. All are 12 players who are actually taken as respondents out of the size of 12 respondents.

2.4 Data Collection Method

In gathering the data, the researchers approached the chosen basketball players of Zone 10, Baraga Bagong Silang to ask permission. After the approval, the researchers asked the respondents regarding the time and day they were to conduct the same to have the leg power skill test. During the time given by the respondents the researchers conducted the leg power skill test. Prior the test, it was emphasized that the respondents should carefully fill out the information sheet that was given to them. The information sheet contained all variables needed in the study

2.5 Statistical Tools Used

After the information sheets were retrieved and collected, the researcher tabulated and analyzed the data using the following formula: Frequency Count and Percentage. This statistics was used in summarizing the data and the profile of the respondents Percentage Formol.

$$\text{Percentage (\%)} = \frac{\text{---}}{N} \times 100$$

3 Results and Discussion

This chapter presents, analyzes and interprets the data drawn from the conduct of the study. This is done in the manner the problems are presented.

3.1 Profile of the Respondent

Table 1. Frequency and Percentage Distribution of the Respondent's Age.

Age(in years)	Frequency	Percentage
16 years old	2	16.7%
17 years old	3	25%
18 years old	3	25%
19 years old	4	33.3%
Total	12	100%

Table 1 displays the frequency and percentage distribution of the respondent's age. As displayed on the table, there are 2 or 16.7% of the respondents having an age of 16 years, 3 or 25% have an age of 17 years, 3 or 25% have an age of 18 years, and 4 or 33.3% have an age of 19 years. As we observed on the data, most of the respondents are aging 19 years old.

Table 2. Frequency and Percentage Distribution of Respondent's Weight

Weight in Kilograms	Frequency	Percentage
49 to 52 Kilograms	5	41.7%
53 to 46 Kilograms	3	25%
57 to 60 Kilograms	4	33.7%
Total	12	100%

Table 2 displays the frequency and percentage distribution of the respondent's weight. Table 2 shows that there are 5 or 41.7% of the respondents have weights within 49 to 52 Kilograms, 3 or 25% weigh within 53 to 56 Kilograms, and 4 or 33.7% that weigh within 57 to 60 Kilograms. As being presented in the table, out of 12 respondents, 5 of them weigh between 49 to 52 kilograms.

Table 3. Frequency and Percentage Distribution of the Respondent's Height

Height (in Inches)	Frequency	Percentage
59 to 62 inches	8	66.7%
63 to 66 inches	3	25.0%
67 to 70 inches	1	8.3%
Total	12	100%

Table 3 displays the frequency and percentage distribution of the respondent's height . As shown in Table 3, 8 or 66.7% of the respondents stands within 59 to 62 inches. 3 or 25% stands within 63 to 66 inches, and only 1 or 8.3% of the respondents has a height within 67 to 70 inches. 8 out of 12 respondents measure a height of 59 to 62 inches as being presented on the table.

Table 4. Frequency and Percentage Distribution of the Respondent's Numbers of Years in Playing Basketball

Numbers of years in playing basketball	Frequency	Percentage
3 to 4	9	75%
9 to 15	3	25%
Total	12	100%

Table 4 displays the frequency and percentage distribution of the respondent's numbers of years in playing basketball. As presented on the table, there are 9 or 75% of the respondents who have played basketball within 3 to 4 years and 3 or 25% have played basketball within 5 to 6 years. There are 9 out of 12 respondents that have 3 to 4 years experience in playing basketball as presented in the table.

Table 5. Frequency and Percentage Distribution of the Respondent's Leg Power

Leg Power (in Inches)	Frequency	Percentage
17 to 18	2	16.7%
19 to 20	6	50.0%
21 to 22	2	16.7%
23 to 24	2	16.7%
Total	12	100%

Table 5 displays the frequency and percentage distribution of the respondent's leg power. As shown on the table, there are 2 or 16.7% of the respondents having a leg power of 17 to 18 inches, 6 or 50% having 19 to 20 inches, 2 or 16.7% having 21 to 22 inches, and 2 or 16.7% having 23 to 24 inches. This implies that most of the respondents have a leg power of 19 to 20 inches.

Table 6. Frequency and Percentage Distribution of Respondent's Rebounding Performance

Performance	Frequency	Percentage
4 to 5	8	66.7%

6 to 7	2	16.7%
8 to 9	2	16.7%
total	12	100%

Table 6 displays the frequency and percentage distribution of the respondent's Rebounding Performance As displayed in the table,there are 8 or 66 7% of the respondents that have a rebounding performance of within 4 to 5,2 or 167% have a rebounding performance within 6 to 7, and 2 or 16 7% have a rebounding performance of 8 to 9. This implies that most of the respondents have a rebounding performance of 4 to 5

Table 7. Correlation Between the Respondent's Leg Power and Rebounding Performance

Correlation	Probability	Remark
0.2444	0.444	Not Significant

Table 7 displays the correlation between the respondent's leg power and rebounding performance of the respondents As shown on the table,the correlation of the leg power and the rebounding performance of the respondents is 0 2444 Since the correlation is Positive. this implies that as leg power increase,the rebounding performance also increases. But since the probability (0.444) is not less than the level of significance which is 0 05,the correlation is not significant

Table 8. Correlations Between the Rebounding Performance and the Moderating Variables

Moderating Variable	Correlation	Probability	Remark
Height	-0.1413	1.990	Not Significant
Weight	-0.4824	0.112	Not Significant
Numbers of years in playing basketball	0.2678	0.400	Not Significant

As displayed on Table 8,the respondent's rebounding performance and height are negatively correlated This implies that as the height of the respondent increases,therebounding performance decreases These findings we in consonance to basketmail.com According to the site interestingly, When we look at height ordering (7610 75), the apparent difference between offensive and defensive rebounding (7310 6N) nearly totally vanishes. I have some early ideas, but I'd have to take a look to truly figure out what's going on there. My hypothesis is that undersized big men who capture more defensive rebounds than the typical player simply because they are playing a position that places them closer to the basket on defense may explain why ordering correlates better to DRB% than height. In other words, a player who must spend the most of his minutes guarding the team's second-tallest player on the court (based on a height ranking of 4), will be guarding opposing close to the hoop, and thus be in a better position for defensive bounds than the typical 6'8" player who is guarding SFs on the perimeter (and who

has a height ordering of 37" Since the probability (0.661) is greater than the level of chance which is 0.05, the correlation is not significant. The respondents' rebounding performance and weight are negatively correlated. This is that the weight of the respondents increases the rebounding performance decreases or as the weight of the respondent's decreases the rebounding performance increases. Since the correlation coefficient is .04824, the correlation is moderate. This means that there are other factors that affect the respondent's rebounding performance. The probability (112) is greater than 0.05, thus the correlation is not significant.

There is a positive correlation between the respondent's rebounding performance and the number of years in playing basketball. This implies that as the number of years in basketball increases the rebounding performance also increases. However, since the correlation coefficient is 0.2678, the correlation is weak. This implies that there are other factors affecting the rebounding performance of the respondents. The probability is greater than 0.05, the correlation is not significant.

4 Conclusions

Based on the findings of the study, majority of the respondents are 19 years old, had 49 to 52 kilograms in weight, 59 to 62 inches in height, and 3 to 4 years in playing basketball. As to their performance, the majority of the respondents had 19 to 20 inches in leg power, and 4 to 5 rebounds out of 10 on their rebounding performance. The rebounding performance of the respondents was not affected by their leg power. However, it is being projected on the tables that those who have higher leg powers have most rebound scores than those which has low leg power. The rebounding performance is not affected by the moderating variables such as height, weight, and numbers of years in playing. However, the tables imply that as the number of years in playing basketball increase, the rebounding performance also increases.

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