

# Survey of Physical Fitness Level of the Men's Basketball Team Pre National Sport Bangka Belitung 2020

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**Abstract**— Physical fitness is a person's ability to carry out everyday activities easily without feeling exhausted and still having enough energy to do other activities. Through good physical fitness aims to create the next generation of people who excel in all aspects will be realized. The purpose of this study was to determine the level of physical fitness of the Men's Basketball Team Pre National Sport Bangka Belitung 2020. The sample in this study amounted to 12 athletes from the Men's Basketball Team Pre National Sport Bangka Belitung 2020. The sampling technique used was total sampling. The method of collecting data using the survey method with the Indonesian Physical Fitness Test for ages 16-19 years. The results of the study that the Physical Fitness Level of the Men's Basketball Team Pre National Sport Bangka Belitung 2020 excellent criteria of 8.33% (1 athlete), good criteria 25.00% (3 athlete), sufficient criteria 41.67% (5 athlete), less criteria 16.67% (2 athlete), very less criteria 8.33% (1 athlete). Based on these data it is concluded that the Physical Fitness Level of the Putra Basketball Team Pre National Sport Bangka Belitung 2020 has sufficient criteria.

**Keywords:** *physical fitness level, men's basketball team, Pre National Sport*

## I. INTRODUCTION

Successful the development of physical fitness and physical fitness level in the community, as well as helping to improve the physical quality of the community. Coaching physical fitness can be done with a variety of physical exercises or sports. Basically, various types of exercises or sports to improve physical fitness can be used as a means of training, one of which is in basketball.

Physical fitness is an important aspect for a person to provide the ability to run a more productive life and be able to adjust to proper physical loading [1]. The fitness aspect is absolutely necessary for someone especially for athletes because it plays an important role in determining the process and outcome of a match. The achievement of athletes is

determined by internal determinants, namely psychology, tactics, physical, engineering, anthropometrics; while external, namely facilities and situations [2].

Physical conditions for athletes, in this case are basketball athletes, play an important role because it requires a combination of physical components and techniques [3]. Therefore, every basketball player is required to have excellent physical condition which is useful for supporting individual performance in a team. Some things that need to be considered in an effort to get excellent physical fitness include doing strength training in the form of push ups to train arm and shoulder muscle strength, sit ups to train abdominal muscle strength, back up to train back muscle strength; speed training by doing short to long distance running exercises, endurance training with weight training and flexibility exercises such as stretching [4].

Preparation of the basketball team to compete must pay attention to the physical abilities of the players by increasing physical fitness [5], having the results of 14 athletes research there are 50% have never done a fitness test because the players are new and come from outside Java. The Satya Wacana Salatiga basketball athlete who will be competent in the pre-match for the Pre national sport Bangka Belitung in 2020 needs to be physically prepared in order to show optimal performance. One effort that can be done is to conduct a study of the level of physical fitness. This physical fitness level test can be used as a study for basketball coaches to assess the physical performance of athletes in an effort to improve aspects of physical fitness in the period before and when competing. The general physical fitness test is based on the Indonesian Physical Fitness Test, especially for athletes aged 16-19 years. These aspects of testing include (1) running 60 meters, (2) pull up, (3) sit up, (4) vertical jump, and (5) running 1,200 meters.

Based on the explanation above, that physical condition is an important element in basketball. So every physical condition

training needs special attention that is planned carefully and systematically so that the level of physical fitness of basketball athletes who will compete in the pre national Sports of Bangka Belitung in 2020 becomes more optimal. Therefore, the aim of this research is for the level of physical fitness of basketball athletes who will compete in the pre national sport Bangka Belitung 2020. Through this research it is expected to provide knowledge and input for trainers to pay attention to the physical fitness of each athlete, can also be used as an illustration to improve physical fitness for athletes who are still considered lacking and can optimize the physical fitness of athletes who are included in good or prime condition.

**II. METHOD**

The research method used was descriptive research with a quasi-experimental survey survey model. Respondents in this study were Satya Wacana basketball athletes from Satya Wacana Christian University who were involved in the basketball team of the Pre National Sports of Bangka Belitung 2020 totaling 12 people. The main criteria for selecting respondents in this study were registered as Satya Wacana Salatiga basketball team athletes, male athletes who were involved as basketball players in the pre national sport 2020, and a maximum age of 16-19 in 2019. The main variables are will be examined is the level of physical fitness with instruments including (1) running 60 meters, (2) pull up, (3) sit up, (4) vertical jump, and (5 ) run 1,200 meters. The research data will be analyzed descriptively using Microsoft Excel application that is displayed in tables and graphs with stages (1) calculating test scores from each test, (2) categorizing each athlete's physical fitness level for each type of test, and (3 ) calculate the percentage of total physical fitness level achievement with the formula  $P = (F / N) \times 100\%$ . Then, categorize the overall physical fitness results and individual test items using a scale of 5.

**III. RESULT**

Based on data analysis of the results of research on the physical fitness level of the men's basketball team Pre National Sports Bangka Belitung 2020, which consists of 60 meters running test, Pull Up, Sit Up, Vertical Jump, and running 1,200 meters, a maximum score of = 60.72, a minimum score of = 39.67, an average of = 50.00 and a standard deviation of = 5.70. Based on the results of data analysis of the Physical Fitness Level of the Bangka Belitung Pre National Sports Men's Team in 2020, it shows an average of = 50.00 or categorized as sufficient.

**TABLE I. PHYSICAL FITNESS LEVEL OF THE BANGKA BELITUNG PRE NATIONAL SPORTS TEAM IN 2020**

No	Interval Class	Frekuensi		Klasifikasi
		Absolut	Relatif (%)	
1	>58,55	1	8,33	excellent
2	52,85-58,54	3	25,00	good
3	47,15-52,84	5	41,67	sufficient
4	41,45-47,14	2	16,67	less
5	<41,44	1	8,33	Very less
Total		12	100,00	

Based on table 1 above, that the frequency distribution of the results of the test results of the physical fitness level of the men's basketball team Pre National Sports Bangka Belitung 2020, obtained interval classes that are above 58.55 with an excellent classification of 1 person (8,33%), interval classes 52.85-58.54 with good classifications of 3 people (25.00%), interval classes 47.15-52.84 with enough classifications of 5 people (41.67%), interval classes 41,45-47,14 with a classification of less than 2 people (16.67%), and interval classes that are under 41.44 with a classification of less than 1 person (8.33%).

Based on the results of data analysis of the Physical Fitness Level of the Bangka Belitung Pre National Sports Week Men's Team in 2020, it shows an average of = 50.00 or categorized as sufficient. For more details, each test item indicator will be elaborated as follows:

**A. Running 60 Meters**

Based on the 60 meter running test results from 12 men's basketball teams in the Pre National Sports in 2020, a maximum score of = 7.40 seconds is obtained, a minimum score of = 6.12 seconds, an average of = 6, 98 seconds and standard deviation of = 0.32 seconds. Based on the results of the analysis of 60-meter running test data, showing an average of = 6.98 seconds or categorized as sufficient.

**Table II. Frequency Distribution Test (60m)**

No	Interval Class (second)	Frekuensi		Klasifikasi
		Absolut	Relatif (%)	
1	<6,49	1	8,33	excellent
2	6,50-6,81	2	16,67	good
3	6,82-7,14	7	58,33	sufficient
4	7,15-7,46	2	16,67	less
5	>7,47	0	0,00	Very less
Total		12	100,00	

Based on table 2 above, that the frequency distribution of 60 meter test results from 12 men's basketball teams in the Pre National Sports in 2020, obtained interval classes that are under 6.49 seconds with excellent classification of 1 people (8.33%), class intervals of 6.50-6.81 seconds with a good classification of 2 people (16.67%), class intervals of 6.82-7.14 seconds with enough classifications of 7 people (58, 33%), interval classes from 7.15 to 7.46 seconds with a classification of less than 2 people (16.67%), and interval

classes that are above 7.47 seconds with a classification of less than once as many as 0 people (0.00%).

### B. Pull Up

Based on the results of the Pull Up test for 1 minute from 12 men's basketball teams Pre National Bangka Belitung in 2020, obtained a maximum score of = 23.00, minimum score of = 3.00, an average of = 10, 00 and the standard deviation of = 5.20. Based on the results of the Pull Up test data analysis, it shows an average of = 10.00 or categorized as sufficient.

TABLE III. FREQUENCY DISTRIBUTION TEST (PULL UP)

No	Interval Class	Frekuensi		Klasifikasi
		Absolut	Relatif (%)	
1	>18	1	8,33	excellent
2	13-17	1	8,33	good
3	7-12.	7	58,33	sufficient
4	2-6.	3	25,00	less
5	<1	0	0,00	Very less
Total		12	100,00	

Based on table 3 above, that the frequency distribution of Pull Up test results from 12 men's basketball teams in the Pre National Sports in 2020, obtained interval classes that are above 18 with an excellent classification of 1 person (8, 33%), interval classes 13-17 with a good classification of 1 person (8.33%), interval classes 7-12 with a sufficient classification of 7 people (58.33%), interval classes 2-6 with a classification of less than 3 people (25.00%), and interval classes that are under 1 with a very less classification are 0 people (0.00%).

### C. Sit Up

Based on the results of the Sit Up test for 1 minute from 12 men's basketball team Pre National Sports Bangka Belitung 2020, a maximum score of = 41.00, a minimum score of = 25.00, an average of = 33, 17 and the standard deviation of = 4.49. Based on the analysis of the Sit Up test data, it shows an average of = 33.17 or categorized as sufficient.

TABLE IV. FREQUENCY DISTRIBUTION (SIT UP)

No	Interval Class	Frekuensi		Klasifikasi
		Absolut	Relatif (%)	
1	>40	1	8,33	excellent
2	35-39	4	33,33	good
3	31-34	3	25,00	sufficient
4	26-30	3	25,00	less
5	<25	1	8,33	Very less
Total		12	100,00	

Based on table 4 above, that the frequency distribution of Sit Up test data results from 12 men's basketball teams of the Bangka Belitung PreNational Sports 2020, obtained interval classes that are above 40 with an excellent classification of 1

person (8, 33%), interval classes 35-39 with good classification of 4 people (33.33%), interval classes 31-34 with enough classifications of 3 people (25.00%), interval classes 26-30 with less classification as much 3 people (25.00%), and interval classes under 25 with very little classification of 1 person (8.33%).

### D. Vertical Jump

Based on the results of the Vertical Jump test of 12 men's basketball teams in the Bangka Belitung Pre National Sports in 2020, a maximum score of = 74.00 cm was obtained, a minimum score of = 61.00 cm, an average of = 66.33 cm and standard deviation of = 4.23 cm. Based on the results of the Vertical Jump test data analysis, it shows an average of = 66.33 or is categorized as sufficient.

TABLE V. FREQUENCY DISTRIBUTION TES (VERTICAL JUMP)

No	Interval Class	Frekuensi		Klasifikasi
		Absolut	Relatif (%)	
1	>73	1	8,33	excellent
2	68-72	3	25,00	good
3	64-67	5	41,67	sufficient
4	60-63	3	25,00	less
5	<59	0	0,00	Very less
Total		12	100,00	

Based on table 5 above, that the frequency distribution of Vertical Jump test results from 12 men's basketball teams in Pre National Sports in 2020, obtained interval classes above 73 cm with a very good classification of 1 person (8, 33%), 68-72 cm interval class with good classification of 3 people (25.00%), 64-67 cm interval class with enough classification of 5 people (41.67%), interval class of 60-63 cm with less classifications of 3 people (25.00%), and interval classes under 59 cm with very less classifications of 0 people (0.00%).

### E. Running 1.200 Meters

Based on the 1,200 meter running test results from 12 men of the Bangka Belitung Pre National Sports in 2020, a maximum score of = 6.55 minutes, a minimum score of = 5.57 minutes, an average of = 6, 08 minutes and standard deviation of = 0.34 minutes. Based on the analysis of the running test data of 1,200 meters, it shows an average of = 6.08 minutes or is considered sufficient.

**TABLE VI. FREQUENCY DISTRIBUSI FREKUENSI TES (RUNNING 1.200 METERS)**

No	Interval Class (second)	Frekuensi		Klasifikasi
		Absolut	Relatif (%)	
1	<5,57	1	8,33	excellent
2	5,58-5,91	2	16,67	good
3	5,92-6,25	6	50,00	sufficient
4	6,26-6,59	3	25,00	less
5	>6,60	0	0,00	Very less
Total		12	100,00	

Based on table 6 above, that the frequency distribution of 1,200 meters of running test results from 12 men's basketball teams Pre National Sports in 2020, obtained interval classes under 5.57 minutes with excellent classification of 1 people (8.33%), class intervals 5.58-5.91 minutes with good classifications of 2 people (16.67%), class intervals 5.92-6.25 minutes with enough classifications of 6 people (50.00 %), class intervals 6.26-6.59 minutes with less classifications of 3 people (25.00%), and interval classes that are above 6.60 minutes with less classifications of 0 people (0.00%).

#### IV. DISCUSSION

Based on the results of research on the physical fitness level of the men's basketball team Pre National Sports Bangka Belitung 2020, shows an average of = 50.00 or categorized as sufficient. The category is still not maximal, because to obtain a very good category must be a score above 58.55. The results of the study were similar in men's basketball athletes at Training Center in Central Java in the medium category condition [6]. Fitness tests on male students who take basketball extracurricular activities at SMAN 1 Bantul are mostly in the moderate category at 73.08% [7].

Physical conditions are the basis that must be owned by every person in carrying out activities. Like wise with athletes in all sports, you should have a good level of fitness in order to achieve maximum performance. In the basketball sport it really needs elements of physical conditions such as strength, power, speed, endurance, balance, agility and flexibility, thus directly affecting the achievement of athletes [8]. General physical condition can be interpreted by the state or physical ability. According to Bafirman [9] said, "physical condition is the most dominant basic preparation to be able to make a maximum physical appearance". Physical condition is a unified whole of components that cannot be separated, both for improvement and in maintaining performance. According to Wiguna [10] said, "physical condition training refers to a program that is carried out in a systematic, planned and progressive manner which aims to improve the functional abilities of the entire body system so that athlete performance is increasing".

Based on the results of several researchers that improving the athlete's condition, continuous physical exercise needs to

be sought and an evaluation of the training program is needed to achieve excellent categories. This can make it easier for athletes when training. Physical ability at this age needs special attention for the trainer because with very good physical abilities will help the process of perfecting the technique to become skilled and automatic [3]

#### V. CONCLUSION

It was concluded that physical condition is the basis that must be had in every sport, especially basketball, because physical condition is a unified whole of components that cannot be separated, both for improvement and maintenance of achievement. In general, the overall physical fitness level of the Bangka Belitung Pre National Sports men's basketball team in 2020 is still not maximal because it is still categorized as sufficient, so that it does not guarantee the athlete's readiness to achieve the desired achievements. Therefore, physical condition plays an important role in displaying techniques and adjusting the tempo in the game, so that the excellent physical condition must be possessed by athletes in facing the competition, so that achievement can be maximized.

Based on the results of research on the physical fitness level of the men's basketball team Pre National Sports Bangka Belitung 2020, which includes: running 60 meters, Pull Up, Sit Up, Vertical Jump and running 1,200 meters, then it can be concluded that the overall level Physical fitness of the men's basketball team in the Pre National Sports Bangka Belitung 2020 is in the sufficient category.

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