

# Physical Fitness Profile on Female

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## Physical Fitness Profile Of Female : Volleyball Athletes In BVB Club (Bina Voli Banyumas)

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### Abstract

**Background:** A volleyball player needs to be in good shape since it will help them improve their tactics, techniques, and mental state.

**Objectives:** The aim of this study was to find out how fit the female volleyball players of the BVB (Bina Voli Banyumas) club were.

**Methods:** This type of research is quantitative with a descriptive approach. The sample in this study used a total sampling technique, namely all 11 female athletes of the BVB (Bina Voli Banyumas) club. The research instrument uses physical condition test components which include: speed, agility, strength, coordination, explosive power and endurance.

**Results:** The speed component as many as 11 athletes are classified in the good category with a percentage of 100%, the agility component as many as 11 athletes are classified in the very poor category with a percentage of 100%, the strength component as many as 3 athletes are classified in the good category with a percentage of 27% and as many as 8 athletes are classified in the very good category with a percentage of 73%, the explosive power component as many as 4 athletes are classified in the good category with a percentage of 36%, as many as 6 athletes are classified in the fair category with a percentage of 60% and as many as 1 athlete is classified in the less category with a percentage of 4%, the coordination component as many as 4 athletes are classified in the good category with a percentage of 37%, as many as 2 athletes are classified in the fair category with a percentage of 18%, as many as 3 athletes are classified in the poor category with a percentage of 27% and as many as 2 athletes are classified in the very poor category with a percentage of 18%, the endurance component as many as 5 athletes are classified in the poor category with a percentage of 46%, as many as 4 athletes are classified in the poor category with a percentage of 36% and as many as 2 athletes are classified in the very poor category with a percentage of 18%.

**Conclusion:** The physical fitness profile of female volleyball athletes at the BVB (Bina Voli Banyumas) club ranges from poor to very good. The category that needs improvement is agility.

**Keywords:** Physical fitness profile, Female athletes, Volleyball, Physical condition.

## INTRODUCTION

Sports serve as an important platform for achievement and represent the honorable identity of a nation. Athletic success can elevate the status of a country, making it renowned and appreciated by the global community, thereby providing many advantages to the nation due to its recognition and admiration from the international community. However, achieving outstanding athletic performance is not an easy endeavor. It requires rigorous efforts, unwavering dedication, and collaborative involvement of all stakeholders involved to realize the optimal performance that every athlete strives to achieve. Superior team performance is essentially the result of the coaching provided to athletes through a carefully structured and deliberate training regimen (Lesmana & Broto, 2019:44). Sports are physical activities that are good for the body and mind. In addition to being good for your health and fitness, sports may also be a way to compete with others to reach a goal, either alone or in groups (Firmansyah et al., 2021: 87).

Volleyball is among the most globally recognized sports. As stated by Syafruddin (2004) in (Anggara Z & Firdaus, 2020:7), volleyball is characterized as "a very attractive team sport that falls into the category of offensive and defensive games." M. Yunus (1992) argues that the basic concept of a volleyball game involves "pushing the ball into the enemy's territory over the net, while attempting to stop the ball in the opponent's area." In line with the principles governing the game of volleyball, it is imperative for an athlete to possess optimal physical, technical, tactical, and psychological attributes to excel in the sport of volleyball and achieve better performance results. According to Syafruddin (2011) states that: "There are two factors that influence an achievement, these factors are internal factors and external factors. The internal factors are physical condition, technique, tactics, and mental factors, while external factors are factors that arise from outside the player such as coaches, coaches, climate and weather, infrastructure, spectators, referees, organizations, families, nutrition, and so on" (Anggara Z & Firdaus, 2020: 7).

In general, physical condition is a crucial factor in achieving sporting achievements, especially in terms of mastering the techniques and tactics of the game. The level of contribution of physical condition to achievement depends on the specific needs of each sport, including volleyball. According to the Ministry of National Education (2000: 101) in (Kadafi & Irsyada, 2021), in terminology, physical condition includes the basic abilities needed before, during, and after the training process takes place. Suharno in Erianti (2004) in (Kadafi & Irsyada, 2021) states that the components of physical condition that affect achievement include strength, speed,

flexibility, endurance, and coordination. Therefore, improving physical condition is essential to support the ability to play volleyball optimally. These components have general and specific characteristics that are needed to support achievement in volleyball. In volleyball, athletes are required to have muscle explosive power which plays an important role in the implementation of movements such as serves and smashes.

Physical condition according to Jonath Krempel (1981) defines that, Physical condition is a state that comprises endurance, strength, flexibility, speed, and coordination. What also needs to be considered is that the success or achievement of a person in sports, especially in volleyball, depends on the quality of his physical abilities (physical condition). The better a person's physical condition or ability, the greater the opportunity for achievement. Vice versa, the lower the physical condition of a person, the more difficult it is to achieve achievement. The purpose of physical condition training is <sup>11</sup>to improve the functional quality of the body and guidance to achieve optimal performance in a particular sport. Physical condition preparation is very important to improve and stabilize the quality of technique, without adequate physical condition preparation it will be difficult to achieve high achievement. For example in a volleyball game, to learn the smash technique a player must have good leg power, arm power and endurance so that he is able to jump high to hit the ball over the net (Saputra & Aziz, 2020: 50).

Physical condition is the initial condition, during and after experiencing a training process. <sup>1</sup>The initial ability of physical condition is a measure or guideline for making exercise planning. The physical conditions needed must be in accordance with the techniques and strategies in volleyball games, so that technical abilities can continue to increase, special physical conditions are needed in volleyball games, such as endurance, leg muscle power, togok flexibility, eye-hand coordination, reaction speed and agility. The ability of special physical conditions shows the specificity of a sport <sup>25</sup>because of the need for ability, will differ between one sport and another. From the description of the physical condition components <sup>1</sup>in volleyball, the physical condition of volleyball athletes will be continuous with the mastery of techniques in volleyball games. For athletes who have physical conditions <sup>1</sup>in the good or even very good category, the mastery of techniques will be good or even very good too. But on the contrary, for athletes who have physical conditions in the category of less or even very less, then mastery of the technique will be less or even very less.

Mastery of basic techniques in volleyball is an important aspect that contributes to improving playing skills. According to Suharno (2000: 16) in (Setyo Pahlevi, 2019), basic

techniques in volleyball include serving, up passing, down passing, set-up (feeder), smash, and block. Volleyball is played in teams, where one team consists of six players who must work together by utilizing individual techniques that are mastered to form team cohesiveness (Suharno, 2000: 15) in (Kadafi & Irsyada, 2021). Therefore, individual <sup>26</sup>mastery of basic techniques is needed to support <sup>26</sup>the effectiveness of the game in volleyball. Volleyball games have a variety of basic techniques, which include serving, passing, smash, and block. Of these techniques, serving is one of the fundamental abilities that every player needs to master. Serving is one of the important techniques in volleyball. Initially, the serve was only considered as the opening blow of the game. However, from a strategic perspective, the serve can also act as the first step in an attack to score points and win the match. Based on the way it is executed, the serve can be divided into two types, namely the lower serve and the upper serve.

Based on the description above, the researcher will reveal <sup>1</sup>the physical condition of female <sup>15</sup>athletes in volleyball at the BVB club (Bina Voli Banyumas). <sup>15</sup>The purpose of this study is to determine the physical condition of female athletes at the BVB (Bina Voli Banyumas) club which consists of speed, agility, explosive power, arm muscle strength, coordination, and endurance. From the results that will be obtained later, it is hoped that it can make material for coaches in designing training programs according to the abilities of each athlete.

## METHODS

### Study Design and Participants

<sup>4</sup>This research is a type of descriptive research, namely a study <sup>4</sup>that tries to describe the object or subject under study, using a quantitative approach. A quantitative approach is an approach related to numbers which are then analyzed using statistics in order to describe the results (Hardiansyah, 2018) in (Lindianawati et al., 2022: 71). <sup>20</sup>The purpose of this descriptive research is to find out and get a true picture or reality of the state of the object under study (Halman, 2016). <sup>13</sup>The method used in this research is a survey method with data collection techniques using test parameters and physical condition measurements. The survey method chosen by the researcher because the method is a method carried out at the present time, whose purpose is to obtain characteristics, opinions and test hypotheses (Zamawi & Burstiando, 2020). <sup>12</sup>The population in this study were female volleyball athletes of the BVB (Bina Voli Banyumas) club, totaling 11 athletes. The sample in this study involved all female volleyball athletes of the BVB (Bina Voli Banyumas) club.

### Research Instruments

The instruments used in this study to obtain data are as follows:

- 1) 30 meter sprint to measure speed.
- 2) Shuttle run to measure agility.
- 3) Push up to measure strength.
- 4) Vertical jump to measure explosive power.
- 5) Throwing and catching tennis balls to measure coordination.
- 6) Multistage fitness test to measure endurance.

### Data Analysis

After the data is obtained and processed, the next step is to draw conclusions. To draw conclusions from the data that has been obtained, it is then converted into a percentage to analyze the description data. The data is then processed using the formula below:

$$P = f/n \times 100\%$$

#### Description:

P = Percentage sought

F = Frequency

N = Number of respondents

### RESULTS

The results of research that have been conducted by researchers are a description of the physical condition profile of female volleyball athletes of the BVB club (Bina Voli Banyumas). The data that has been collected in this study is the result of tests and measurements in the form of speed, agility, strength, explosive power, coordination flexibility and endurance tests. The following are the results of tests and measurements of BVB (Bina Voli Banyumas) club women's volleyball athletes presenting on Table 1. Based on the test data in Table 1 above, the results of the descriptive analysis of the data profile of female volleyball athletes from the BVB (Bina Voli Banyumas) club show an overview of physical condition components consisting of 5 parameters, including speed, agility, strength, explosive power, coordination and endurance.

**Table 1.** Physical Condition Test Results Data for Female Volleyball Athletes of BVB Club (Bina Voli Banyumas)

No	Initials	Physical Condition Test Item							
		Speed	Agility	Strength		Explosive Power		Coordination	Endurance
		30 M	Shuttle	Push	Sit	SBJ	Vertical	LTBT	MFT
		Sprint	Run	Up	Up		Jump		
1.	DPA	4.97	14.83	45	34	200	48	8	32.4
2.	FA	5.5	14.01	36	39	179	39	18	31.4
3.	KMA	5.02	15.60	40	34	169	38	18	26.0
4.	RPM	5.44	17.68	32	37	138	37	26	26.0
5.	JMG	5.53	16.51	40	35	165	28	16	26.8
6.	NH	5.54	14.45	31	46	193	37	29	33.6
7.	AR	5.19	14.93	33	36	152	38	27	34.7
8.	ALH	5.19	14.93	41	41	197	42	27	34.7
9.	KRF	5.49	14.95	38	45	175	34	14	28.3
10.	SM	5.26	16.23	41	37	160	38	21	27.6
11.	YRK	5.11	14.95	30	30	165	44	20	30.2

1. Speed

Based on the results of data analysis from the speed test (30 m sprint), the speed value is classified in the good category with a percentage of 100%. Of the 11 female athletes of the BVB (Bina Voli Banyumas) club who took the test, all athletes were in the good category with a time range of 4.4 - 5.6 seconds. For more details can be seen in bold below.

**Table. 2** Speed Test Results (30 m sprint) BVB women's volleyball athletes (Bina Voli Banyumas)

Test score	Women		Category
	Σ Subject	Percentage (%)	
≤ 4,3 det	0	0%	Very good
4,4 – 5,6 det	11	100%	Good
5,7 – 6,2 det	0	0%	Fair
6,3 – 7,0 det	0	0%	Poor
≥ 7,0 det	0	0%	Very poor
Jumlah	11	100%	

## 2. Agility

Based on the results of data analysis from the agility test (shuttle run), the agility value obtained is classified in the very poor category with a percentage of 100%. Of the 11 female athletes of the BVB club (Bina Voli Banyumas) who took the agility test, all athletes fell into the category of less than once with a range of time > 9.01 seconds. For more details can be seen in bold below.

**Table. 3** Results of the agility test (shuttle run) BVB women's volleyball (Bina Voli Banyumas)

Test score	Women		Category
	$\Sigma$ Subject	Percentage (%)	
$\leq 6,01$ det	0	0%	Very good
7,00 – 6,01 det	0	0%	Good
8,00 – 7,01 det	0	0%	Fair
9,00 – 8,02 det	0	0%	Poor
$\geq 9,01$ det	11	100%	Very Poor
<b>Jumlah</b>	<b>11</b>	<b>100%</b>	

## 3. Strength

Based on the results of data analysis from the strength test, the strength value is classified in the good category with a percentage of 27% and very good with a percentage of 73%. Of the 11 female athletes of the BVB (Bina Voli Banyumas) club who took the test, 3 athletes were in the good category with a percentage of 23%, skort es 25 - 32 and 8 athletes were in the very good category with a percentage of 73%, skort es > 33. For more details, see the thickness below.

**Table. 4** Results of the strength test (push up) BVB women's volleyball (Bina Voli Banyumas)

Test score	Women		Category
	$\Sigma$ Subject	Percentage (%)	
$\leq 11$	0	0%	Very Poor
12 – 17	0	0%	Poor
18 – 24	0	0%	Fair
25 – 32	3	27%	Good
$\geq 33$	8	73%	Very Good
<b>Jumlah</b>	<b>11</b>	<b>100%</b>	



#### 4. Explosive Power

Based on the results of data analysis from the explosive power test (Vertical Jump), the explosive power value is classified in the good category with a percentage of 36%, the fair category with a percentage of 60% and the less category with a percentage of 4%. Of the 11 female athletes of the BVB (Bina Voli Banyumas) club who took the test, 4 athletes were in the good category with a percentage of 36%, skort es 39 - 49, 6 athletes in the fair category with a percentage of 60%, skort es 30 - 38 and 1 athlete in the less category with a percentage of 4%, skort es 21 - 29. For more details can be seen in bold below.

**Table. 5** Results of the explosive power test (vertical jump) BVB women's volleyball (Bina Voli Banyumas)

Test score	Women		Category
	Σ Subject	Percentage (%)	
≥ 50 cm	0	0%	Very good
39 - 49	4	36%	Good
30 - 38	6	60%	Fair
21 - 29	1	4%	Poor
≤ 21cm	0	0%	Very Poor
Jumlah	11	100%	

#### 5. Coordination

Based on the results of data analysis from the coordination test (LTBT), the coordination value is classified in the good category with a percentage of 37%, the fair category with a percentage of 18%, the less category with a percentage of 27% and very less with a percentage of 18%. Of the 11 female athletes of the BVB (Bina Voli Banyumas) club who took the test, 4 athletes were in the good category with a percentage of 37%, score 25 - 30, 2 athletes were in the fair category with a percentage of 18%, test score 20 - 24, 3 athletes were in the less category with a percentage of 27%, test score 15 - 19 and 2 athletes were in the very poor category with a percentage of 18%, score < 15. For more details, it can be seen in bold below.

**Table. 5** Results of the coordination test (LTBT) BVB women's volleyball (Bina Voli Banyumas)

Test score	Women		Category
	Σ Subject	Percentage (%)	
≥ 30	0	0%	Very good
25 - 30	4	37%	Good
20 - 24	2	18%	Fair
15 - 19	3	27%	Poor
≤ 15	2	18%	Very Poor

Jumlah	11	100%
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## 6. Endurance

Based on the results of data analysis from the endurance test (MFT), the endurance value is classified in the moderate category with a percentage of 46%, the category is less with a percentage of 36% and very less with a percentage of 18%. Of the 11 female athletes of the BVB (Bina Voli Banyumas) club who took the test, 5 athletes were in the fair category with a percentage of 46%, test scores 31 - 35, 4 athletes were in the less category with a percentage of 36%, test scores 27 - 30 and 2 athletes were in the very less category with a percentage of 18%, skort es < 26. For more details, see the thickness below.

**Table. 5** Results of the endurance test (MFT) BVB women's volleyball (Bina Voli Banyumas)

Test score	Women		Category
	Σ Subject	Percentage (%)	
≥ 42	0	0%	Very good
36 - 41	0	0%	Good
31 - 35	5	46%	Fair
27 - 30	4	36%	Poor
≤ 26	2	18%	Very Poor
Jumlah	11	100%	

## DISCUSSION

Based on the analysis and processing of data regarding the physical condition of female volleyball athletes at the BVB (Bina Voli Banyumas) club, this discussion This section examines the research problems above, which are how the physical condition of female volleyball athletes at the BVB (Bina Voli Banyumas) club is described, with regard to: speed, agility, strength, explosive power, coordination, and endurance. As well as understanding how the results of physical condition tests affect how well a team occurs. The following is a more in-depth look at the solutions to the study goals listed above:

### 1. Speed

There are many different meanings of agility in athletics. The most common and widely accepted one is that it is being able to change position rapidly and easily (Hribernik et al., 2021: 441). Agility also has a correlation with physical traits like endurance, strength, and technique. The cognitive part of agility is another way to look at it. This includes strategies

like visual scanning and anticipating what will happen next. Agility may be increased through regular training since physical traits can be trained.

From the results of the physical condition test on BVB (Bina Voli Banyumas) female volleyball athletes, namely in the good category (4.4 - 5.6 seconds) with a percentage of 100% of the 11 athletes who took the physical condition test. These results reveal that the players' agility is really good and needs to be kept up all the time. This is because every athlete needs to be able to move rapidly in a volleyball game to get to the ball before it dies. Speed training can help volleyball athletes to move positions in playing to attack and defend. In terms of attacking speed functions as a power process in hitting hard smashes (Kadafi & Irsyada, 2021: 131).

Dig is one of the skills in volleyball that requires agility. Dig is a way to keep the ball from falling or striking the ground by sliding it so that it stays alive and can be played. As shown by (Wardani et al., 2020: 29) in his research entitled "The Relationship between Hand Eye Coordination, Feet and Agility to Dig Ability in Fortius Volleyball Athletes". The results show that there is a link between agility and the capacity to dig. The correlation coefficient of 0.663 shows that the agility variable adds 43.96% to the capacity to dig, where the  $t^{count}$  value = 4.687 is greater than the  $t^{table} = 2.048$ , so the results of the ability to dig are influenced by agility.

## 2. Agility

Agility is also called flexibility. It involves being able to alter the direction of movement or body parts quickly. Agility puts more focus on slowing down and speeding up as necessary, as well as changing direction and speed, according to the Ministry of Youth and Sports (2007: 38). Greg Gatz (2009: 114) in (Wardani et al., 2020: 28) also says that agility is the ability to immediately react to conditions, initiate coordination fast, and stop to keep the game under control.

From the results of the physical condition test on 11 BVB (Bina Voli Banyumas) women's volleyball athletes, namely 11 athletes in the category of very poor with a percentage of 100% (> 9.01 seconds). With the test results that have been obtained, the coach must be able to improve with a qualified and adequate training program. Agility in volleyball is needed to make unexpected movements, namely to anticipate the arrival of the ball and the ball, therefore volleyball athletes are required to have good agility. The results showed that BVB (Bina Voli Banyumas) female volleyball athletes were in the very poor category. Given the importance of agility for volleyball, it needs to be improved to the maximum.

The agility part is related to a volleyball move called "Dig." Dig means using your hands to stop the ball from dropping to the ground and stop your opponent from getting points. Wardani et al. (2020: 29) talk about the link between agility and the results of dig ability in female athletes from the Fortius volleyball club. The results come from the correlation coefficient test, which shows that the value of  $t_{hitung} = 4.687$  is greater than  $t_{tabel} = 2.048$ . This means that the correlation coefficient  $r^2 = 0.663$  is significant. Research findings show that there is a good link between agility and the results of dig ability. The coefficient of determination for eye, hand, and foot coordination with dig ability results is 0.663. This suggests that agility affects 43.96% of the dig ability outcomes.

### 3. Strength

The strength of the abdominal muscles and the power of the arm muscles. When a volleyball player hits the smash, they can hit forcefully and aim for the opponent's target region if they have powerful abdominal and arm muscles. So that it will make the points you want. To make a decent shot, you also need to be able to move about a lot when you grab the ball to hit it. It is hoped that with good togok flexibility, you can hit the ball in the air (Antara et al., 2018: 3). Strength is the ability to make a set of muscles contract as much as possible. To make force against and external resistance. The results of muscle strength can help athletes do better (Bompa, 229: 2009) in (Kadafi & Irsyada, 2021).

The results of the arm muscle test research using push ups. In the strength test (60 seconds push up) 11 BVB (Bina Voli Banyumas) female volleyball athletes as many as 3 athletes were in the good category by obtaining a percentage of 27% and as many as 8 athletes were in the very good category by obtaining a percentage of 73%. These results indicate that the arm muscle strength (upper determinant) of the athletes is good enough but must still be improved again with an adequate training program to increase the strength of the arm muscles.

Arm muscle strength is needed with volleyball athletes who aim to combine with speed which can cause a process in explosive power or explosive power, so that athletes get hard smash shots so that the enemy is difficult to receive the ball. In research conducted by (Antara et al., 2018: 5) showed that the correlation test of abdominal muscle strength (abdominal) with smash accuracy showed, a significant value of 0.000, 0.05 or a  $r^{count}$  value of 0.810 >  $r^{table}$  0.404 was obtained. This means that there is a relationship between abdominal muscle strength and smash accuracy in volleyball games. In addition, in arm muscle strength (upper determinant), the results of the correlation test of arm muscle power with smash accuracy obtained a significant value of 0.000 > 0.05 or a  $r^{count}$  value of 0.718 >  $r^{table}$  0.404. This means that there is a relationship between arm muscle power and smash accuracy in volleyball games.

#### 4. Explosive Power

Muscle explosiveness is one of the biomotor components that is very important in sports activities, especially in volleyball, because explosive power will determine how strong people hit, push, lift and so on. Leg muscle explosiveness is one of the physical condition components that a volleyball athlete must have. Muscle power can be defined as an ability of a group of muscles to produce work in a very fast time. Juvier in (Qhausar, 2019: 78) suggests that leg muscle explosiveness is the ability to do work quickly or one of the elements of material ability that is much needed in sports, especially in sports that have jumping / jumping, throwing, rejecting, and sprinting. Leg explosiveness is the ability of muscles to overcome loads or resistance with a very high contraction speed. Explosive power is needed in performing good basic techniques in certain sports.

From the results of the vertical jump test research on 11 BVB (Bina Voli Banyumas) female volleyball athletes, namely 4 athletes in the good category with a percentage of 36%, as many as 6 athletes in the fair category with a percentage of 60%, and 1 athlete in the less category with a percentage of 4%. These results show that the athlete's leg muscle explosive power is still very lacking and needs to be improved again with a variety of adequate programs to increase the explosive power of the leg muscles. In volleyball, leg muscle explosiveness has a big enough role to support the smash technique when attacking, where the smash technique in volleyball is one of the weapons or attacks that kill opponents so that the team can get points.

The importance of muscle explosiveness in volleyball has been revealed by (Chandra & Mariati, 2020: 104-105) in the results of his research which says that based on the results of correlation analysis of leg muscle explosiveness with volleyball smash ability produces a coefficient of  $r = 0.745$  so that a contribution of 57% is obtained. Thus there is a significant contribution between my leg muscle explosiveness and smash ability in male volleyball athletes of padang adios.

#### 5. Coordination

The coordination component is an important element in serving in volleyball. Coordination is an adjustment that affects a group of muscles and during movements that give an indication of various skills. Coordination is not only important for serving techniques but also important in passing and smash techniques. In volleyball, eye-hand coordination is needed for lower and higher passing actions, serving, and smashing. These movements need a lot of eye-hand synchronisation to put the ball where you want it. Coordination movements

are a part of almost all human movements, both in everyday life and in sports. For example, in long jumping, a series of jumping movements must come together to form one jumping movement, which requires excellent muscle coordination.

From the results of the research on the ball catch throwing test (LTBT) on 11 BVB (Bina Voli Banyumas) female volleyball athletes, namely as many as 4 athletes in the good category with a percentage of 37%, as many as 2 athletes in the fair category with a percentage of 18%, as many as 3 athletes in the less category with a percentage of 27% and as many as 2 athletes in the very poor category with a percentage of 18%. From the data obtained, the BVB (Bina Voli Banyumas) women's volleyball athletes still need to be more effective with a good training programme. In volleyball, every player needs to have good coordination so that their technical skills get better. For example, they need to be able to coordinate their eyes and hands during the service, lower and upper passing, and smash movements to make excellent movements.

Lower and upper passing, serving, and smashing are some of the techniques that require coordination considerations. The eyes and hands are two examples of coordination links in this scenario. There are research results that show a link between eye-hand coordination and top passing in volleyball games (Sukirno, 2011: 45). Based on the outcomes of research and data analysis, it is said that  $r$  count obtained the result of 0.44, while  $r^{adj}$  is 0.21. This shows  $r^{count}$  is greater than  $r^{adj}$   $0.44 > 0.21$ , then eye-hand coordination has a strong contribution to the ability to pass over with the largest contribution of 44% to the results of passing over in volleyball games. Another study conducted by (Sari & Guntur, 2017: 9) revealed the effect between high hand-eye coordination and low hand-eye coordination on the results of volleyball upper serve skills, namely from the results of the upper serve it can be seen that trainees who have high hand-eye coordination have an average of 41.18 and trainees who have low hand-eye coordination have an average value of 16.45. The conclusion that can be drawn is that trainees who have high hand-eye coordination are better than trainees who have low hand-eye coordination on volleyball top serve skills.

## 6. Endurance

Endurance is the ability to keep your energy levels up for a long time without getting tired. Endurance in terms of muscle work is how long a set of muscles can operate together. Endurance in terms of the energy system is how long the body's organs can work together. (Sukadiyanto, 2011: 61) in (Setyo Pahlevi, 2019: 251). Endurance is a state of the body that lets it work for a long time without being too tired after finishing the work. According to

Lumintuarso (2007: 65) in (Alpra Tamara & Nurrochmah, 2017: 265) endurance is the ability to do things for a long time without getting too tired. Some people also say that endurance is the ability of an athlete to do long, high-intensity tasks using their muscles (Trianto, et al, 2009: 58 in Alpra Tamara & Nurrochmah, 2017: 265).

From the results of the MFT test research on 11 BVB (Bina Voli Banyumas) female volleyball athletes, namely as many as 5 athletes in the fair category with a percentage of 46%, as many as 4 athletes in the less category with a percentage of 36%, and as many as 2 athletes in the very less category with a percentage of 18%. These findings reveal that the athletes' endurance is still not very excellent. This is clear from the fact that none of them are in the good or very good group, and the highest score in the fair category is the highest score for each athlete. The coach should be able to help the athlete build up their endurance with a good training programme based on the test results.

Salunta & Yendrizal (2019: 260-261) claim that athletes can't yet overcome exhaustion from physical work for a long time because of the test findings. Athletes who don't have a lot of endurance can definitely mess up the work of the heart, lungs, and blood flow throughout the body. So, athletes work harder to improve their endurance. Long-distance running (marathon), swimming, long-distance cycling, and jogging for a longer duration are all exercises that athletes can do.

## CONCLUSION

It can be concluded that the speed component in the good category, the agility component (shuttle run) are classified in the very poor category, the component of arm muscle strength are classified in the very good category. The explosive power component (vertical jump) are classified in the fair category and the coordination component (LTBT) are classified in the good category.

## CONFLICT OF INTEREST

The author hereby declares that this research is free from conflicts of interest with any party.

## AUTHOR'S CONTRIBUTION

Amal contributed to the initiation of the main idea and objectives of the research, the design of the research approach and methods, the writing of the initial draft of the article as a

whole, and the supervision of the entire research and writing process. Febrianta contributed to field observations and experiments, statistical analysis and data interpretation, and the writing and revision of the manuscript. Ismoko contributed to the collection and compilation of relevant scientific references, the preparation of tables, graphs, or illustrative images, as well as data validation and verification of the accuracy of the results. Nugheni contributed to scheduling research activities and coordinating the team, managing research proposals and reporting, and revising the content and structure of the article. Pratiwi contributed to language editing and proofreading of revised results prior to publication and final manuscript review prior to publication.

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