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REVIEW OF THE PHYSICAL CONDITION OF FEMALE ROWING ATHLETES IN KUANTAN SINGINGI DISTRICT

TINJAUAN KONDISI FISIK ATLET PUTRI OLAHRAGA DAYUNG DI KABUPATEN KUANTAN SINGINGI

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Abstract

This study aims to determine the physical condition of female rowing athletes in Kuantan Singingi Regency. This study is a study with a quantitative descriptive approach, because the data is presented in the form of numbers and analyzed based on statistical analysis. The sample in this study was 9 female rowing athletes from Kuantan Singingi Regency. The instruments in this study were physical ability tests for sports, namely sit and reach tests, abdominal muscle endurance measurements, arm muscle endurance measurements, VO2MAX measurements, power tests and measurements or explosive power tests. Data analysis will be analyzed using descriptive statistics in the form of frequency tabulation by describing the research results obtained from various test measurements of the level of physical condition. The results showed that: Abdominal and arm muscle endurance still needs improvement because abdominal muscle endurance is 44.4% in the "good and less" category. Arm muscle endurance with the majority of athletes in the "moderate" category of 44.4%. While leg muscle endurance showed very good results with a large percentage of 88.8%. Then, the flexibility of athletes is mostly in the "good" category. And VO2MAX endurance with the majority in the "less" category of 66.6% to the "very less" category with a large percentage of 33.3%. It can be concluded that the physical condition of female rowing athletes in Kuantan Singingi Regency must be improved again.

Keywords: Review, Physical Condition, Rowing

Abstrak

Penelitian ini bertujuan untuk mengetahui kondisi fisik atlet putri dalam olahraga dayung di Kabupaten Kuantan Singingi. Penelitian ini merupakan penelitian dengan pendekatan deskriptif kuantitatif, karena data diwujudkan dalam bentuk angka dan dianalisis berdasarkan analisis statistik. Sampel dalam penelitian ini adalah sebanyak 9 orang atlet putri dayung

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Kabupaten Kuantan Singingi. Instrument dalam penelitian ini adalah tes kemampuan fisik cabang olaraga yaitu tes *sit dan reach*, pengukuran daya tahan otot perut, pengukuran daya tahan otot lengan, pengukuran VO2MAX, tes dan pengukuran power atau tes daya ekssplosif. Analisis data akan dianalisis dengan mengunakan statistik deskriptif yaitu berupa tabulasi frekuensi dengan cara mendeskripsikan hasil penelitian yang diperoleh dari berbagai pengukuran tes terhadap tingkat kondisi fisik. Hasil penelitian menunjukkan bahwa: Daya tahan otot perut dan lengan masih memerlukan peningkatan karena daya tahan otot perut terdapat sebanyak 44,4% dalam kategori "baik dan kurang". Daya tahan otot lengan dengan mayoritas atlet berada dalam kategori "sedang" sebesar 44,4%. Sementara daya tahan otot tungkai menunjukkan hasil yang sangat baik dengan besar persentase 88,8%. Kemudian, kelentukkan atlet sebagian besar berada dalam kategori "baik". Dan daya tahan VO2MAX dengan mayoritas berada dalam kategori "kurang" sebesar 66,6% hinnga kategori "kurang sekali" dengan besar persentase 33,3%. Dapat disimpulkan bahwa kondisi fisik atlet dayung putri Kabupaten Kuantan Singingi harus ditingkatkan lagi.

Kata Kunci: Tinjauan, Kondisi Fisik, Dayung

1. INTRODUCTION

The changes in sports in this modern era have increased so much, sports have become a daily necessity that cannot be separated from human life. Humans do sports activities to improve their quality of life to be healthier. In addition to improving the quality of life, sports are also a means of friendship to be able to gather and chat with friends, friends, family, besides that sports are used as a competition to achieve achievements (Triawan et al. 2019).

Rowing is a branch of water sports which in its implementation uses equipment in the form of boats and oars. Rowing is one of five branches of water sports besides sailing, diving, water skiing and motorboats. Broadly speaking, this sport is divided into two parts, namely achievement sports and traditional sports, in big events such as boat variations ranging from the shape of the boat structure or its size which is adjusted to the event being competed, which includes kayaking, rowing, canoeing or also known as Canadian, dragon boat or traditional dragon boat and slalom. Rowing sports known in Indonesia are basically a combination of three main sports, namely rowing, canoeing, and dragon boat race. At the international level, the three sports have their own international parent organizations, namely the International Canoe Federation (ICF) for canoeing and the Federation Internationale des Societes GYLURQ (FISA) while the International Dragon Boat Federation (IDBF) for traditional boat race/dragon boat. However, in Indonesia, the three sports are under one parent, namely the All-Indonesia Rowing Sports Association or PODSI (Amelia, 2022).

Kuantan Singingi Regency, with its wealth of natural resources, such as rivers flowing through its territory and biodiversity that supports water sports activities, as well as its strong cultural heritage, is a potential place for the development of rowing. The connection between the rich nature and local traditions provides a great opportunity for the community to utilize these resources, including in developing rowing athletes, especially female athletes, who can bring honor to the region in various competitions.

Sport has an integral role in shaping character, health, and social interaction in society. In recent years, women's sports competitions have grown rapidly. Hormonal factors play a major role in the differences in athlete performance. Rowing not only requires technical skills, but also encourages physical fitness, teamwork, and a competitive spirit. Although rowing can

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be a vehicle for developing the potential of local athletes, attention to the participation and achievements of female athletes is often inadequate. Women, as an inseparable part of society, have great potential to make significant contributions to the world of sports.

Physical condition is the main factor in achieving the desired performance. The components of the rower's physical condition are very important, such as the strength of the arm muscles to pull and push from both rower's arms so that they can produce speed and power so that the frequency of rowing to increase the speed of the boat, the reaction is very important for athletes when starting so that it produces a very fast movement response when hearing the start signal. In rowing, good muscle endurance is needed for each individual in order to be able to perform basic movements optimally. Thus, a team will be formed that can continue to perform optimally from the beginning to the end of the race. To increase muscle endurance, regular, measurable, and programmed physical exercise is needed by paying attention to the quality and quantity of exercise (Asmuddin, 2021).

The reality in the field shows that PODSI Kuansing rowing athletes often face challenges related to physical conditions. Based on initial observations, many athletes lack adequate muscle strength and endurance, which results in less than optimal performance during the competition. Several factors such as the lack of adequate training facilities, the lack of a structured training program, and limited access to proper nutrition are obstacles that athletes often face.

Bafirman & Asep (2019), said that physical condition training is a systematic and progressive repetition process for improvement and maintenance by emphasizing the efficiency of the body's function. Whether physical conditions are good or not, in addition to training factors, is also closely related to daily life activities, such as rest, nutritional intake, work, family environment, school and health. According to (Andi et al. 2023) rowing requires prime physical condition for its athletes, because in every competition that athletes participate in, they will face various challenges, in addition to physical and mental strength, they must fight against the natural environment, equipment and rowing infrastructure as a medium that is also a burden in every competition that is participated in. The formation of physical condition depends on a person's goal in doing physical exercise or sports activities, such as to improve a person's physical fitness or fitness, to improve the dominant biomotor abilities needed to improve the achievements of the sport being played.

Coordination in the rowing movements of each athlete from the arms, shoulders, kicking legs and turning the waist must be maintained together in order to provide the correct movement. Balance is also needed in 1 rowing team in a boat so as not to roll over during the race. Flexibility is needed for rowers so that each movement is flexible so that the speed of the boat can glide quickly. Endurance is the movement of each athlete who has the ability to use muscles continuously for a long time (Azizah & Widodo 2019).

Exercise can increase the muscle strength of both girls and boys which will indirectly increase their muscle endurance. With the same training intensity, the increase in girls is greater than in boys. Endurance training uses relatively light weights with relatively high frequency. It is very possible for young women to compete with young men as long as there is not much difference in weight and skill. Women's sports are separated from men's because of the possibility of injury. In simple terms, training can be formulated, namely all power and effort to improve overall physical condition with a systematic and repetitive process with increasing training load, time or intensity every day. Someone does training because it is a form of effort to achieve a goal.

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Training is nothing new, since ancient times training has been carried out systematically to achieve a certain goal (Asmuddin, 2021). Research by Angga et al. (2024) shows the results of the calculation of the average value of the physical condition value that has been carried out on athletes, it is known that the results of the Review of the Level of Physical Condition of Pencak Silat Athletes at Madrasah Aliyah Al Hidayah Sukamaju Kuantan Singingi Regency are 1.92 which is included in the less category. Therefore, in rowing sports, physical condition has a very important role both to ensure the creation of optimal performance from athletes or to achieve achievements in the field of sports in general and rowing in particular. The background of this study was driven by the desire to detail and understand the physical condition of female athletes in the field of rowing sports in Kuantan Singingi Regency.

2. RESEARCH METHODS

This type of research is included in research with a quantitative descriptive approach, because the data is presented in the form of numbers and analyzed based on statistical analysis to show the potential of female rowing athletes in Kuantan Singingi Regency. After that, it is explained or described according to the data obtained in fact.

Population and Sample

Population is the total number of research subjects (Sugiyono, 2019). If someone wants to research all the elements in the research area, then the research is a population research, the study or research is also called a population study or census. In the context of this research, the population used is all female rowing athletes totaling 9 people.

A sample is a portion or representative of the population being studied. In relation to the population that is not so large and is still within the researcher's capabilities, the entire population is used as a sample in this study (Sugiyono, 2022). This sampling technique is called total sampling. Thus, the total sample in this study was 9 people.

Method of Collecting Data

The data collection methods in this study are by means of observation, questionnaires, interviews, and documentation. Observation is a data collection technique carried out through observation, accompanied by records of the condition or behavior of the target object. While the questionnaire is a list containing a series of questions regarding a problem/research field to be studied. While interviews are a form of data collection technique by means of a one-way oral question and answer process. Then documentation is a data collection technique by utilizing data in the form of books, or notes in the form of documents regarding the object being studied.

Data Analysis Techniques

In accordance with the objectives and research questions submitted, the data testing that has been obtained will be analyzed using descriptive statistics (frequency tabulation). By describing the research results obtained from various measurements (tests) on the level of physical conditions and analysis using formulas as stated by Sudjana (1991) in Rhevaldy (2021) as follows:

$$\text{Rumus: } P = \frac{F}{N} \times 100\%$$

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Keterangan :

P = percentage

F = frequensy (score)

N = Numberof test samples

3. RESULTS AND DISCUSSION

Research Result

1) Abdominal Muscle Endurance

Based on the research results, the abdominal muscle endurance of rowing athletes in Kuantan Singingi Regency can be described in the following table:

Table 1. Results of the Abdominal Muscle Endurance Test of Rowing Athletes from Kuantan Singingi Regency

No	Category	Interval Class	Frequency	Relatif Frequency %
1	Good	**>25**	**2**	**22,2**
2	Sufficient	**21 – 25**	**2**	**22,2**
3	Moderate	**15-20**	**1**	**11,1**
4	Less	**9-15**	**4**	**44,4**
5	Poor	**<9**	**0**	**0**
	Total	**-**	**9**	**100**

Table 1. shows that out of 9 athletes tested, most are in the "Good" and "Fair" categories, each with a frequency of 2 athletes (22.2%). Only 1 athlete (11.1%) is in the "Moderate" category, and in the "Less" category there are 4 athlete frequencies (44.4) while no athletes are in the "Poor" category. This shows that there is still the same proportion that needs to improve these abilities to achieve more optimal performance.

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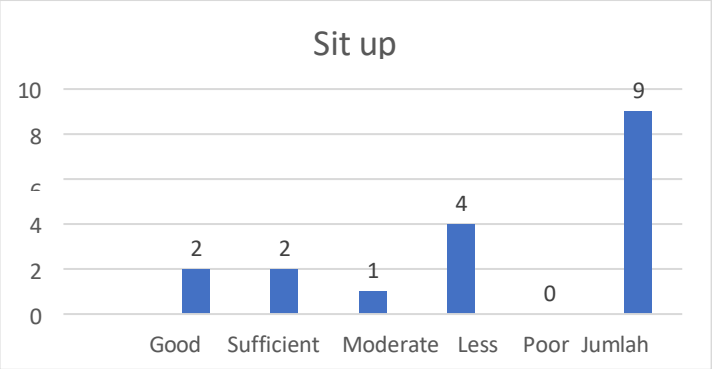
Figure 1. Sit Up Test Results Diagram



2) Arm Muscle Endurance

Based on the research results, the flexibility of rowing athletes from Kuantan Singingi Regency can be described in the following table:

Table 2. Frequency Distribution of Arm Muscle Endurance of Kuantan Singingi Rowing Athletes

No	Category	Interval Class	Frequency	Frekuensi Relatif %
1	Very Good	**>35**	**0**	**0**
2	Good	**25-35**	**3**	**33,3**
3	Moderate	**15-24**	**4**	**44,4**
4	Poor	**5-14**	**2**	**22,2**
5	Very Poor	**>5**	**0**	**0**
	Total	**-**	**9**	**100**

Based on Table 2. regarding the frequency distribution of arm muscle endurance of rowing athletes in Kuantan Singingi Regency, of the total 9 athletes tested, the majority were in the "Moderate" category with a frequency of 4 athletes (44.4%). A total of 3 athletes (33.3%) were in the "Good" category, while 2 athletes (22.2%) were in the "Poor" category. No athletes were included in the "Very Good" or "Very Poor" categories. These results indicate that most athletes have moderate to good arm muscle endurance, but there are still some athletes who need to improve their arm muscle endurance to achieve optimal performance.

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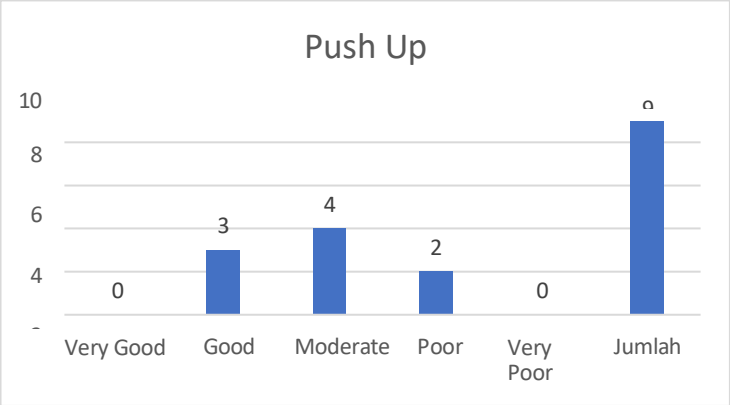
Figure 2. Push Up Test Results Diagram



3) Flexibility

Based on the research results, the flexibility of rowing athletes from Kuantan Singingi Regency can be described in the following table:

Table 3. Frequency Distribution of Flexibility of Kuantan Singingi Rowing Athletes

No	Category	Interval Class	Frequency	Relatif Frequency %
1	Super	>+ 30	0	0
2	Very Good	+20 - +30	1	11,1
3	Good	+11 - + 20	6	66,6
4	Sufficient	+1 - + 10	2	22,2
5	Moderate	-7 – 0	0	0
6	Poor	14-8	0	0
7	Very Poor	< - 15	0	0
	Total	-	9	100

Table 3 shows the frequency distribution of flexibility of Kuantan Singingi rowing athletes based on the results of body flexibility measurements. Of the 9 athletes tested, the majority, namely 6 athletes (66.6%), were in the "Good" category with a range of +11 to +20 cm, while 1 athlete (11.1%) was in the "Very Good" category (+20 to +30 cm) and 2 athletes (22.2%) were in the "Fair" category (+1 to +10 cm). There were no athletes in the "Super" category (>+30 cm) or categories below "Fair," namely "Moderate," "Poor," or "Very Poor." These results indicate that in general, athletes have a good level of flexibility, but further

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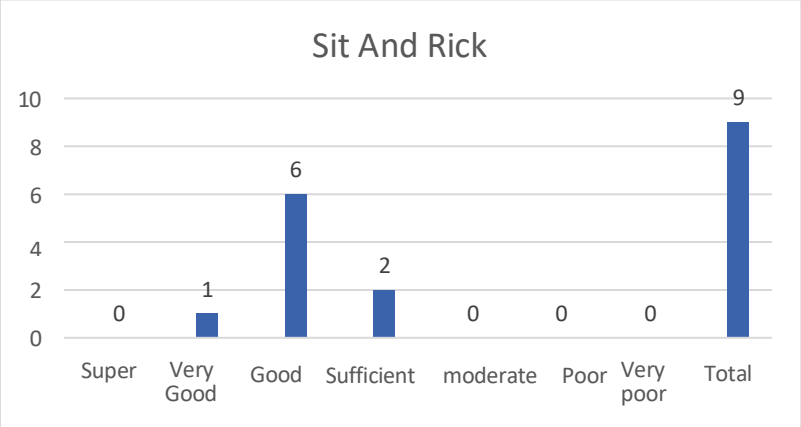
improvement is needed so that more athletes reach the "Very Good" or even "Super" category, considering that optimal flexibility can increase movement efficiency in rowing.

Figure 3. Sit and Rick Test Results Diagram



4) Vo2max Endurance

Based on the research results, the Vo2max endurance of rowing athletes in Kuantan Singingi Regency can be described in the following table:

Table 4. Frequency Distribution of Vo2max Endurance Data of Kuantan Singingi Rowing Athletes

No	Category	Interval Class	Frequency	Relatif Frequency %
1	Very Good	**>54.30**	**0**	**0**
2	Good	**54.20 - 49.30**	**0**	**0**
3	Moderate	**55.00 - 49.20**	**0**	**0**
4	Poor	**49.10 – 43.30**	**6**	**66,6**
5	Very Poor	**<43.20**	**3**	**33.3**
	Total	**-**	**9**	**100**

Table 4 shows the frequency distribution of VO_2max endurance of Kuantan Singingi rowing athletes based on fitness level categories. Of the 9 athletes tested, the majority, namely 6 athletes (66.6%), were in the "Poor" category with a VO_2max range of 49.10–43.30 ml/kg/min, while the other 3 athletes (33.3%) were in the "Very Poor" category with a VO_2max value below 43.20 ml/kg/min. No athletes had endurance levels in the "Moderate," "Good," or "Very Good" categories, indicating that in general the athletes' aerobic fitness was still low. These results indicate the need for a more intensive and structured training program to improve their aerobic capacity, considering that optimal VO_2max is very important in rowing sports that require high endurance.

Figure 4. Balake Test Result Diagram

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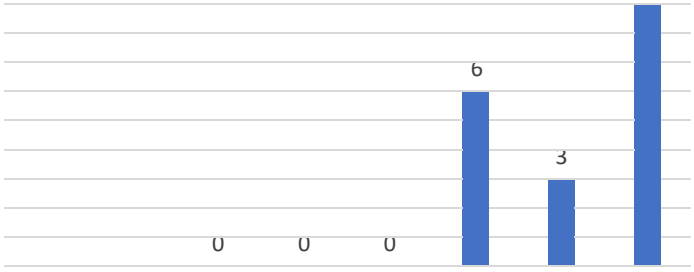
5) Leg Muscle Endurance

Based on the research results, the leg muscle endurance of rowing athletes in Kuantan Singingi Regency can be described in the following table:

Table 5. Frequency Distribution of Leg Muscle Endurance Data for Kuantan Singingi Rowing Athletes

No	Category	Interval Class	Frequency	Relatif Frequency %
1	**Excellent**	**>60**	**8**	**88,8**
2	Very Good	**51 – 60**	**1**	**11,1**
3	Good	**41 – 50**	**0**	**0**
4	Sufficient	**31 – 40**	**0**	**0**



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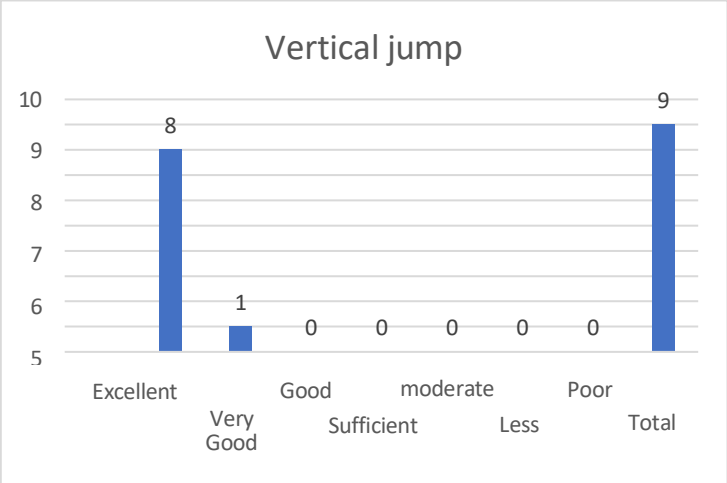
5	Moderate	**21 – 30**	**0**	**0**
6	Less	**11 – 20**	**0**	**0**
7	Poor	**< 11**	**0**	**0**
	Total	**-**	**9**	**100**

Based on Table 5. regarding the frequency distribution of leg muscle endurance of rowing athletes in Kuantan Singingi Regency, from a total of 9 athletes tested, the majority were in the "Excellent" category with a frequency of 8 athletes (88.8%). Only 1 athlete (11.1%) was in the "Very Good" category, while no athletes were in the "Good", "Fair", "Moderate", "Less", or "Poor" categories. This shows that most athletes have very good leg muscle endurance, which is an important component in rowing, because good leg muscle endurance is needed to avoid excessive fatigue so that athletes are able to undergo longer match times.

Figure 5. Vertical Jump Test Results Diagram



6) Physical Condition Review

Based on the 4 categories that have been determined, the analysis of the results of the Kuantan Singingi rowing athletes' condition capabilities is as follows:

Table 6. Physical Condition Level

No	Category	Interval Class	Frequency	Relatif Frequency %
1	Very Good	**26-30**	**1**	**11,11**
2	Good	**21-25**	**3**	**33,33**
3	Sufficient	**16-20**	**4**	**44,44**
4	Less	**11-15**	**1**	**11,11**
5	Very Poor	**6-10**	**0**	**0,00**
	Total	**-**	**9**	**100%**

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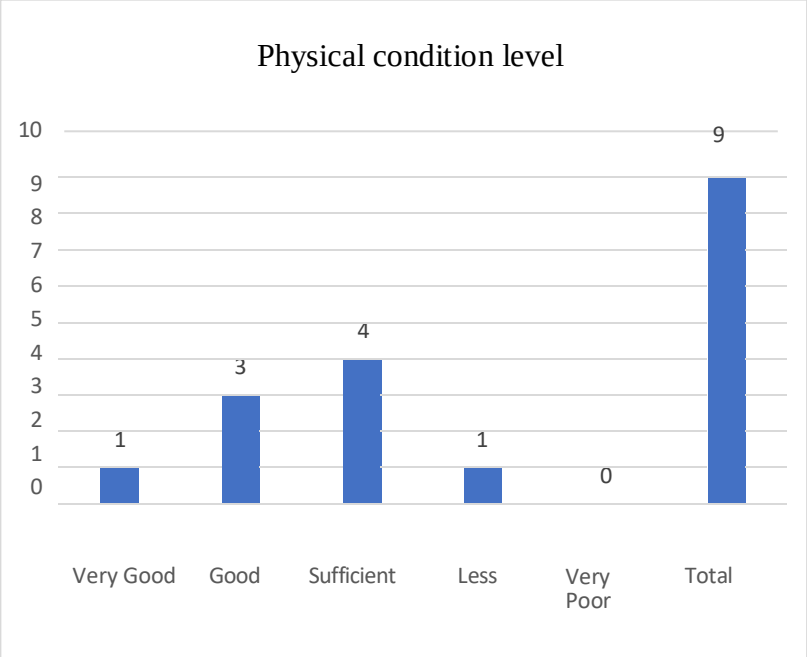
Based on Table 4.6 entitled Physical Condition Level, it can be seen that the physical condition of female rowing athletes in Kuantan Singingi Regency is dominated by the "Fair" category with a frequency of 4 people or 44.44%. Furthermore, there are 3 athletes (33.33%) who are in the "Good" category, and 1 person each (11.11%) is in the "Very Good" and "Poor" categories. Meanwhile, there are no athletes in the "Very Poor" category with a frequency of 0 people (0.00%). These results indicate that most athletes have physical conditions that are at a moderate to good level, although there are still a small number who need to improve their physical condition in order to reach a more optimal category.

Figure 6. Physical condition level diagram



4. CONCLUSION

Based on the research results, the physical condition of Kuantan Singingi rowing athletes showed variations in every aspect measured. The endurance of the abdominal and arm muscles still needs improvement, while the endurance of the leg muscles showed very good results. The flexibility of the athletes was mostly in the good category, but VO2Max endurance was the aspect that needed the most attention because it was still in the less to very less category.

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