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ANALYSIS OF THE PHYSICAL CONDITION OF POPDA ATHLETICS ATHLETES OF TANAH LAUT REGENCY

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ABSTRACT

This study aims to analyze the physical condition of athletes in Popda Athletics Tanah Laut district which focuses on the physical condition of endurance athletes. Good physical condition can affect an athlete's ability to compete, so it is the basis for developing optimal techniques and tactics. Research methods using descriptive quantitative approach method. The population in this study is athletic athletes Popda Pasi Kabutpaten Tanah Laut with a sample of 18 athletes with a total sampling technique. The data were taken through Te lari 2.4 (cooper) which was held at Pertation Kencana Stadium. The results of the study were 1 person in the category very well and trained with a percentage (5.55%), very good at 1 person with a percentage (5.55%), good at 7 athletes with a percentage (38.88%), being 5 athletes with a percentage (27.77%), less than 4 athletes with a percentage (22.22%), and very less there were 0 athletes with a percentage (0%). The conclusion of the study found that the physical condition of the Popda Pasi athletics athletes Tanah Laut Regency was classified as good which showed that overall, the athletes had sufficient basic fitness to undergo training and competition. Further studies are advised to assess other components of physical condition such as muscle strength, speed, agility, and flexibility in order to provide an overall picture of the athlete's physical readiness.
Keywords: physical condition; athlete; athletic; achievement; popda

ANALISIS KONDISI FISIK ATLET ATLETIK UNTUK MENINGKATKAN PRESTASI POPDA DI KABUPATEN TANAH LAUT

ABSTRAK

Penelitian ini bertujuan untuk menganalisis kondisi fisik atlet di Popda Atletik Kabupaten Tanah Laut yang berfokus pada kondisi fisik atlet ketahanan. Kondisi fisik yang baik dapat mempengaruhi kemampuan seorang atlet untuk bertanding, sehingga menjadi dasar untuk mengembangkan teknik dan taktik yang optimal. Metode penelitian menggunakan metode pendekatan kuantitatif deskriptif. Populasi dalam penelitian ini adalah atlet atletik Popda Pasi Kabutpaten Tanah Laut dengan sampel sebanyak 18 atlet dengan teknik total sampling. Data diambil melalui Te lari 2.4 (cooper) yang diadakan di Stadion Pertation Kencana. Hasil penelitian adalah 1 orang dalam kategori sangat baik dan terlatih dengan persentase (5,55%), sangat baik pada 1 orang dengan persentase (5,55%), baik pada 7 atlet dengan persentase (38,88%), menjadi 5 atlet dengan persentase (27,77%), kurang dari 4 atlet dengan persentase (22,22%), dan sangat kurang terdapat 0 atlet dengan persentase (0%). Kesimpulan penelitian didapatkan bahwa kondisi fisik atlet atletik Popda Pasi Kabupaten Tanah Laut tergolong baik yang menunjukkan bahwa secara keseluruhan atlet memiliki kebugaran dasar yang cukup untuk menjalani latihan dan kompetisi. Studi lebih lanjut disarankan untuk menilai komponen lain dari kondisi fisik seperti kekuatan otot, kecepatan, kelincahan, dan kelenturan untuk memberikan gambaran keseluruhan tentang kesiapan fisik atlet.
Kata Kunci: *kondisi fisik; atlet; atletik; prestasi; popda*

INTRODUCTION

Exercise is a basic human need to maintain physical fitness and overall health. With prime physical condition, a person is able to carry out daily activities optimally (Sinulingga et al., 2022; Uyun

et al., 2024). One of the widely known sports that includes basic human movements is athletics. This branch includes walking, running, jumping, and throwing (Hasibuan, 2020; Suhartono, 2020). Athletics consists of track and field events, such as running, jumping, and throwing(Amirudin et al., 2018). The movements in athletics are the basic foundation that is also used in various other sports (Musran et al., 2024). Athletics is also known as the most popular sport that is widely sought after by the general public and is routinely competed in prestigious events such as the Olympics (Suhartono, 2020). In addition to recreation, participation in athletic activities also provides benefits in improving physical and mental fitness(Fauzan et al., 2022).

Previous studies have highlighted the importance of physical condition as a major factor in athlete performance. According to (Islamiati et al., 2022; Wahyono et al., 2024), physical condition reflects the overall body's ability to support physical activity and health. Elements of physical condition such as strength, speed, agility, endurance, and flexibility greatly determine an athlete's performance (S & Kumaran, 2023). According to(Yusnita, 2024)states that good physical condition is an important requirement in developing athlete performance. Several studies also emphasize that athletes who do not have ideal physical condition will have difficulty achieving peak performance during training or matches (Eddy et al., 2021; Rai et al., 2024). Meanwhile,(Andrianto, 2024) states that physical condition can be improved through proper and efficient training.

The concept of physical fitness in sports is based on the relationship between muscle strength, flexibility, endurance and speed as determining factors for an athlete's success (Romadona et al., 2022; Silaban et al., 2023). Athletes must be aware of maintaining their physical condition independently through a healthy diet, adequate rest, and regular exercise(Azizah Khusnul Qotimah et al., 2024). In addition, physical fitness factors are also the basis for planning training programs and match strategies(Arifin & Warni, 2019). Optimal physical condition allows coaches to design more effective and measurable training programs.

Although many studies have been conducted on the importance of physical condition for athletes, there are still limitations in studies that specifically evaluate the physical abilities of athletes at the regional level, especially Popda (Regional Student Sports Week) Tanah Laut Regency. There are not many studies that review the extent of the understanding of coaches in designing training programs that are in accordance with the physical needs of local athletes. Therefore, this study offers a new contribution by focusing on evaluating the physical condition of Popda Tanah Laut athletes as a basis for developing more efficient and real-needs-based training strategies. This study aims to evaluate the understanding of Popda Tanah Laut athletic coaches regarding the physical condition of athletes and to formulate strategies for increasing intense and specific physical abilities. It is hoped that the results of this study can support improvements in athlete performance and safety, as well as become the basis for compiling more effective and targeted training programs.

METHOD

This study uses a quantitative descriptive approach to objectively describe the physical condition of endurance athletes in the Popda athletics branch of Tanah Laut District. This approach was chosen because it allows researchers to obtain data that can be analyzed statistically so that the results are more accurate and can be scientifically accounted for (Candra Susanto et al., 2024). The population in this study were all Popda athletic athletes in Tanah Laut District. Because the number was relatively small, the total sampling technique was used, so that the entire population was sampled. The number of samples involved in this study was 18 student athletes, which means 100% of the

population.

The research design used is descriptive survey, with a focus on measuring the physical endurance of athletes using direct observation of the results of the running test. This study does not involve treatment or manipulation of variables, but aims to describe the facts in the field as they are. The test used to measure physical endurance is the Cooper running test of 2,400 meters which was carried out at the Pertation Kencana Stadium (Nuruhidin & Juntara, 2023). The test was conducted on a 400-meter athletic track, with six laps to complete the specified distance. The equipment used in this test includes a stopwatch, a starting flag, and support from supervisors and health officers to ensure safety and order during the testing process.

Before the test begins, athletes are required to wear complete sportswear and do a warm-up to avoid injury. Each participant also receives technical instructions on the test implementation procedure. The test is carried out strictly according to standard physical training procedures, with comprehensive supervision from the testing team, to ensure the validity and reliability of the data obtained. This strict supervision aims to ensure that all participants follow the same procedure, so that the results obtained truly reflect the physical endurance capabilities of each athlete. The presence of health workers is also prepared to ensure the safety of participants during the test process.

The data obtained from the results of the running test were recorded and processed using quantitative descriptive analysis techniques. The analysis steps include recording the travel time of each athlete, calculating the average speed, and grouping scores based on the assessment norm table for male and female athletes that have been compiled by (Bafirman et al., 2023). The measurement results are then presented in the form of tables, graphs, and narrative explanations to describe the athlete's physical condition as a whole. Thus, this study provides comprehensive information regarding the level of physical endurance of Popda athletes which can be used as a reference for the development of further training programs.

Table 1. Men's 2.4 Km running norm

Category	Age group and year					
	13-19	20-29	30-39	40-49	50-59	60 and above
Very less	>15.31	>-19.01	>-19.31	>-20.01	>-20.31	>-21.01
Less	12.11-15.30	18.31-19.00	19.01- 19-30	19.31-20.00	20.01-20.30	20.31-21.00
Medium	10.49-12-10	15.55-18.30	16.31-19.00	17.31-19.30	19.01-20.00	19.31-20.30
Good	09.41-09.48	13.31-15.54	14.31- 16.30	15.56-17.00	16.31-19.00	17.31-19.30
Very nice	08.37-09.40	12.30-13.30	13.00-14.30	13.35-15.55	14.30-15.30	16.30-17.30
Excellent and well trained	<-08.37	<-12.30	<-13.00	<-13.45	<-14.30	<-16.30

Table 2. Women's 2.4 Km running norm

Category	Age group and year					
	13-19	20-29	30-39	40-49	50-59	60 and above
Very less	>18.31	>-19.01	>-19.31	>-20.01	>-20.31	>-21.01
Less	16.55- 16.54	18.31-19.00	19.01- 19-30	19.31-20.00	20.01-20.30	20.31-21.00
Medium	14.31-16.54	15.55-18.30	16.31-19.00	17.31-19.30	19.01-20.00	19.31-20.30
Good	12.30-14.30	13.31-15.54	14.31- 16.30	15.56-17.00	16.31-19.00	17.31-19.30
Very nice	11.50-12.29	12.30-13.30	13.00-14.30	13.35-15.55	14.30-15.30	16.30-17.30
Excellent and well trained	<-11.50	<-12.30	<-13.00	<-13.45	<-14.30	<-16.30

The data in this study was analyzed using frequency tabulation with descriptive statistics based on the formula: $P\frac{F}{N}X\ 100\%$ where P is the percentage, F is the frequency, and N is the number of respondents.

RESULTS AND DISCUSSION

Based on the data obtained from the 2.4 km running test, there were 18 Popda athletic athletes in Tanah Laut Regency as follows. Table 3 presents the results of the 2.4-kilometer Cooper running test conducted by 18 POPDA PASI athletes from Tanah Laut Regency. This test aims to measure the level of physical endurance of athletes based on the time taken to complete the distance. The results show that one 17-year-old male athlete recorded the fastest time, which was 08 minutes 28 seconds, and was classified in the "Very Good and Trained" category. In addition, another athlete with a time of 08 minutes 58 seconds was included in the "Very Good" category. Most of the athletes, namely 7 people, were in the "Good" category, with times ranging from 09:49 to 10:43 minutes. All athletes in this category were males aged between 16 and 17 years, indicating that this age group has relatively good physical endurance.

Table 3. Test results cooper run 2.4 km

No	Name	Gender	Age	Time (Minutes:Seconds)	Category
1	Sample 1	L	17	08:28	Very Good and Well Trained
2	Sample 2	L	17	08:58	Very well
3	Sample 3	L	17	09:49	Good
4	Sample 4	L	17	10:42	Good
5	Sample 5	L	17	10:43	Good
6	Sample 6	L	16	10:06	Good
7	Sample 7	L	17	10:27	Good
8	Sample 8	L	16	10:28	Good
9	Sample 9	L	16	10:43	Good
10	Sample 10	L	16	12:09	Currently
11	Sample 11	L	17	12:05	Currently
12	Sample 12	P	16	16:04	Currently
13	Sample 13	P	17	16:10	Currently
14	Sample 14	P	16	16:08	Currently
15	Sample 15	L	17	13:23	Not enough
16	Sample 16	L	17	13:26	Not enough
17	Sample 17	L	16	13:24	Not enough
18	Sample 18	P	15	18:09	Not enough

The other five athletes were in the “Moderate” category, with times ranging from 12:05 to 16:10 minutes. Interestingly, of these five athletes, three were female, indicating a variation in performance based on gender. Meanwhile, four athletes were in the “Poor” category, with times ranging from 13:23 to 18:09 minutes. Of this group, one 15-year-old female athlete recorded the slowest time, at 18 minutes 09 seconds. Overall, these data show that the majority of athletes have physical endurance in the Good to Moderate category. However, there are still a number of athletes who need special attention to improve their physical condition, especially those in the Poor category. This information can be the basis for coaches to design more specific training programs that are tailored to the needs of each athlete, in order to achieve optimal performance.

Table 4 shows the frequency distribution of physical endurance levels in 18 POPDA PASI athletes in Tanah Laut Regency. From the data, most athletes are in the "Good" category with a total of 7 people (38.88%). This shows that the majority of athletes have a fairly good level of physical fitness to support performance in sports. Furthermore, 5 athletes (27.77%) are in the "Moderate" category, which shows that they have a sufficient level of endurance, but still need improvement through more structured physical training.

Table 4. Frequency Distribution

Category	Frequency (F)	Percentage (P)
Very good and well trained	1	5.55%
Very good	1	5.55%
Good	7	38.88%
Fair	5	27.77%
Poor	4	22.22%
Very poor	0	0%
Total	18	100%

Meanwhile, there are 4 athletes (22.22%) who fall into the "Less" category, indicating that almost a quarter of the total sample still has physical conditions that need to be significantly improved. In the higher category, 1 athlete (5.55%) each falls into the "Very Good" and "Very Good and Trained" categories, indicating that only a few athletes have achieved optimal and ideal fitness levels. This reflects the importance of discipline, consistent training, and a healthy lifestyle in supporting the physical condition of athletes.

Interestingly, no athletes were in the “Very Poor” (0%) category, meaning all participants had a minimally acceptable level of endurance. Overall, this distribution suggests that while most athletes are at a fairly good level of endurance, more intensive physical training and development is needed to encourage more athletes to reach higher fitness categories, thereby supporting optimal performance in competition.

Based on the data from the 2.4 kilometer running test results for 18 POPDA PASI Tanah Laut District athletes, it was found that the majority of athletes (66.66%) were in the Good to Very Good and Well-Trained physical condition category. This shows that there is great potential in athletic achievement if coaching is carried out optimally. This finding is in line with research by (Dewantara & Nurrochmah, 2024) which emphasizes the importance of anthropometric surveys and physical conditions to determine the direction of sports development. A scientific approach through the laboratory as carried out by (Sugihartono et al., 2021)It is also relevant to evaluate the overall physical condition. In the context of coaching young athletes, as shown by (Mauludiyah et al., 2025) as well as (Natasya & Suyoko, 2024), evaluation of physical condition test items is very important in developing a specific and measurable training program.

In addition, several studies such as those conducted by (Yuniasih & Amrulloh, 2024) and (Handoyo & Bawono, 2024) also emphasized that the analysis of the physical condition of athletes in certain sports must consider specific needs and physical endurance as the main indicators (Larasati et al., 2024) as well as (Prasetyo et al., 2024) shows that the distribution of varied physical test results such as in the case of POPDA Tanah Laut, requires attention to athletes who are still in the moderate and less (50%) categories. Something similar was expressed by (Gaol et al., 2024) in the context of basic basketball techniques, where physical condition is the foundation for mastering sports techniques.

Furthermore, research by (Septriani et al., 2025; Wulandari et al., 2025) underlined the importance of knowing the dominant aspects of each athlete's physical condition, whether in strength, speed, or endurance. In this case, POPDA athletes can adjust their training programs based on their respective strengths. A similar thing was emphasized by (Yogha et al., 2024) in the context of taekwondo athletes, where a specific approach to physical fitness has a direct impact on competition results. The concept of optimizing performance through physical condition profile analysis as explained by (Nuryadi et al., 2024), is very contextual for POPDA athletes, because targeted coaching is the key to success in the competition. Therefore, the findings in the Tanah Laut POPDA athlete running test need to be followed by strategic steps, such as periodic evaluations, adjustments to training intensity, and long-term data-based coaching so that achievements at the regional and national levels can be significantly

improved.

Excellent physical condition is a fundamental element for an athlete's success. Athletes with a high level of fitness will have optimal heart and lung capacity, be able to withstand fatigue longer, and have better movement efficiency during the match. Athletes in the Very Good and Well-Trained categories demonstrate characteristics of high discipline, both in following training programs and maintaining a healthy lifestyle outside of the training schedule. This attitude needs to be maintained so that physical condition remains stable and can even be improved through ongoing advanced training programs.

On the other hand, athletes who are categorized as Moderate and Less show the need for intervention in terms of training, discipline, and lifestyle. Some athletes in this category tend to bargain training programs or do not fully follow the coach's instructions, which has a direct impact on decreasing physical performance. Lack of discipline in terms of rest and diet also contributes to their low physical endurance. To improve the performance of all athletes, coaches need to conduct a comprehensive evaluation of the effectiveness of existing training programs. A more individual approach is needed, where athletes with low performance are given special attention, either in the form of motivation, discipline monitoring, or adjusting the training program according to the needs and abilities of each athlete. The application of sustainable, progressive, and long-term goal-oriented training principles is essential.

Furthermore, the training program also needs to be accompanied by education about the importance of a healthy lifestyle. The involvement of health workers and nutritionists is very helpful in supporting the creation of optimal physical conditions. Thus, the success of physical training is not only determined by the intensity of training, but also by the integration between the athlete's physical, mental, and daily lifestyle habits. Overall, the results of this study show that although most athletes already have quite good physical conditions, further training efforts are still needed to improve overall performance. This is important, considering that the sport of athletics relies heavily on physical endurance as a determinant of performance in matches. Therefore, improving the physical quality of athletes is one of the crucial factors in achieving higher achievements in POPDA events and other competitions.

CONCLUSION

The physical condition of POPDA PASI Tanah Laut Regency athletes in order to improve competitive achievement, it can be concluded that 66.66% of athletes have Good to Very Good physical condition, while the other 50% are still in the Moderate and Less category. This shows that there is a fairly large potential for achievement, but more intensive and targeted physical training is still needed. The novelty of this study lies in the application of physical endurance measurements at the regional level in a structured manner, which has not been widely carried out in similar areas. Conceptually, this study enriches the literature on athletic training based on physical condition classification, while methodologically, a simple quantitative approach has proven effective in evaluating athletes' physical readiness. Practically, these results are useful for coaches and coaching institutions in designing individual training based on data. Therefore, it is recommended that coaches prepare training programs according to the physical needs of each athlete, related agencies conduct periodic evaluations, and further research develops a more comprehensive approach by adding other physical indicators. This study has succeeded in achieving its objectives and providing theoretical and practical contributions to improving the achievements of regional athletes.

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