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Physical Fitness: Ps Sipangko Football Club Kabupaten Tapanuli Selatan

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Abstract

Physical health and physical fitness have an important role in the world of sport, especially in the context of football clubs. The PS Sipangko football club in South Tapanuli Regency, which has a long history in the world of football, has unique challenges and opportunities in maintaining the physical health of its players. This study aims to measure and analyze the level of physical fitness of the 13 players of the PS Sipangko football club, South Tapanuli Regency and identify the factors that influence this level of fitness. The research method used was a survey and physical measurements involving club players. The data was analyzed statistically to evaluate the level of physical fitness and its relationship to performance on the field. The results showed that the level of physical fitness of players with an average physical fitness test score was 10.80 in the 14-17 interval with a percentage of 38.46%. Judging from the freshness level norms, the category is classified as Medium. These findings provide a deeper understanding of the importance of maintaining physical health in the world of football and highlight the need to pay attention to aspects of physical fitness in the development of football players.

Keywords: Football; Physical Fitness; Club; Player

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Author's Contribution: a – Study Design; b – Data Collection; c – Statistical Analysis; d – Manuscript Preparation; e – Funds Collection

A. Introduction

Physical fitness is an important aspect for a sports club to have to complete training or competition work (Afandy et al., 2015). Good physical fitness can be improved by paying attention to the factors needed for activities including endurance, strength, speed, flexibility and so on. (Arief et al., 2021) explaining physical fitness can be interpreted as a physical condition that describes physical abilities. Meanwhile, according to the President's Council on Physical Fitness and Sport, physical fitness is defined as the ability to carry out daily activities with full vitality and alertness without experiencing fatigue (Keliat et al., 2019). Physical fitness has an important role for an athlete to support performance both in training and in competition (Amin & Lestari, 2019). The better the level of physical fitness of an athlete, the greater the potential for results obtained when competing. Every athlete must train their physical fitness, because without good physical fitness, an athlete will have the potential to experience significant fatigue, especially during competitions, so that the results obtained will not be optimal.

This research looks at the extent to which the level of physical fitness of PS Sipangko football club players in South Tapanuli Regency influences their performance on the field. This research has deep significance in the context of the PS Sipangko football club and the people of South Tapanuli Regency. The level of physical fitness is not only a determining factor in sports performance, but is also closely related to the personal well-being of players. Recognizing the importance of maintaining physical health, this research aims to provide a better understanding of the factors that influence the level of physical fitness of football players.

In this context, this research will investigate and measure the level of physical fitness of PS Sipangko football club players, with the aim of providing deeper insight into the health and performance of athletes. This is supported by several previous studies. Theory (Kokstejn et al., 2019) emphasizes football activity and broader physical fitness on overall performance. Next, the work (Duncan et al., 2021) underscoring physical fitness with technical skill performance in young soccer players. In addition, research by (Peña-González et al., 2022) shows the importance of maintaining physical fitness and maintaining his fitness level in football.

The level of physical fitness plays a key role in maintaining body health and influences a person's ability to exercise (Aprilia & Januarto, 2022; Rachman & Rahayu, 2023). Other research shows that

motivation to exercise in students has important implications in improving students' physical fitness (Purba et al., 2022). In the context of physical education learning, light physical activity has also been proven to be able to increase physical fitness levels (Prakosa & Hartati, 2022; Yasrial et al., 2021). The importance of the level of physical fitness in maintaining body health and influencing a person's ability to exercise cannot be ignored.

Previous literature has highlighted the relationship between physical fitness levels and sports performance. However, research that focuses on the level of physical fitness of PS Sipangko football club players in South Tapanuli Regency is still limited. This research will fill this knowledge gap by exploring the impact of physical fitness levels in this football club context. The relationship between physical fitness and soccer performance has been widely researched. (Mohr et al., 2003) found that top-class soccer players demonstrated significantly higher levels of high-intensity running and sprinting compared to moderate players, indicating a positive correlation between physical fitness and match performance (Mohr et al., 2003). (Castagna et al., 2010) highlights the relationship between physical endurance tests and physical match performance in elite male youth soccer players, further emphasizing the importance of physical endurance in soccer performance (Castagna et al., 2010; Duncan et al., 2021). Besides that, (Verburgh et al., 2016) demonstrated a positive relationship between physical fitness and neurocognitive function in children, Additionally, (Maehana et al., 2020) focused on physical fitness measurements for amputee soccer field players, demonstrating the relevance of specific physical fitness assessments tailored to different player populations. Furthermore, (Zarei et al., 2018) investigating the importance of targeted fitness interventions in improving soccer performance and reducing injury risk emphasizes the influence of soccer activity and physical fitness.

Physical fitness is essential for soccer players to maintain a high level of performance throughout the season. Research into current fitness levels can help in developing an exercise program. Then understanding the physical fitness of club members can help track player development, especially in youth academies. This ensures that players progress at the right pace and helps in identifying potential talent early. In professional sports, especially football, the difference between winning and losing can be very small. By continuously assessing and improving the physical fitness of its

players, a club can gain a competitive advantage over its competitors. Furthermore, by studying physical fitness levels, clubs can implement preventive measures to reduce the occurrence of injuries. This is important for the players' well-being and health. This can play an important role in setting fitness goals and standards.

This research will use a survey approach to measure the level of physical fitness of players. This study will provide a deeper understanding of the importance of maintaining levels of physical fitness in the world of football, especially at the PS Sipangko football club. The results of this research will form the basis for the development of more effective training strategies and fitness programs for players, with a positive impact on training.

B. Methods

This type of research is quantitative descriptive. The focus is on assessing the physical fitness level of the players. The research method used was a survey and physical measurements involving club players. The population and sample of this research is the PS football club. Sipangko, South Tapanuli Regency. The main results that must be measured by the TKJI test include: 60 meter speed, arm muscle strength, 1 minute abdominal muscle strength, leg explosive power, 1000 meter endurance. Data will be analyzed using descriptive statistics. Descriptive statistics will summarize a player's fitness level using percentage techniques.

C. Result and Discussion

Based on the problems contained in the section described in the PS Football Club. Sipangko, a test was used to measure the level of physical fitness of the PS football club. Sipangko as follows:

1. 60 meter running test data

Presented in a frequency distribution list with a total of 5 classes, namely in the first interval class in the range up to - 9" with a value of 5 there are no athletes in this interval, in the second interval class with a range of 9" - 9.8" with a value of 4 there are there are 5 people with a percentage of 38.47%, in the third interval class in the range 9.2 - 11.4" with a value of 3 there are 6 people with a percentage of 4.15%, in the fourth interval class in the range 12.5" - 14.4" with a value of 2 there are 2 people with a percentage of 14.28%, and in the fifth interval class in the range 12.5” – etc. with a value of 1 there are no athletes in this interval. For more details, see the table below.

Table 1. Distribution of Data from 60 Meter Running Results

No	Interval	Absolute Frequency	Relative frequency
1	S.d – 9”	0	0%
2	9” – 9.8”	5	38,47%
3	9.9” – 12.4”	6	46,15%
4	12.5” – 14.4”	2	15,38%
5	14.5” – dst	0	0%
	Total	13	100%

2. Elbow hanging test data

Based on the results of the bent elbow hanging test, the results of bent elbow hanging from 18 samples obtained the highest score of 16," and the lowest score of 0." Presented in a frequency distribution list with a total of 5 classes, namely in the first interval class in the range 40" and above with a value of 5 there are no athletes in this interval, in the second interval class in the range 20" - 40" with a value of 4 no there are also students in this interval, in the third interval class in the range 8" - 19" with a value of 3 there is 1 person with a percentage of 7.69%, in the fourth interval class in the range 2" - 7" with a value of 2 there are 2 people with a percentage of 15.39%, in the fifth interval in the range 0” – 2” with a value of 1 there were 10 people with a percentage of 76.92%. For more details, see the table below.

Table 2. Distribution of Bending Elbow Hanging Results Data

No	Interval	Absolute Frequency	Relative frequency
1	40” Up	0	0%
2	20” – 39”	0	0%
3	8” - 19”	1	7,69%
4	2” – 7”	2	15,39%
5	0” – 2”	10	76,92%
	Total	13	100%

3. 60 second sitting lying test data.

Based on the results of the 60 second lying down test, the results of the 60 second lying down test were obtained from 18 sample people. The highest score was 26 and the lowest score was 0. Presented in the distribution list, namely in the first interval class in the range 28 and above with a score of 5, there were no students in this interval, in the second interval class in the range 20 – 29 with a value of 4 there are 6 people with a percentage of 46.15%, in the third interval class in the range 10 – 19 with a value of 3 there are 3 people with a percentage of 23.08%, in the interval class fourth in the range 3 – 9 with a value of 2 there is 1 person with a percentage of 7.69%, in the fifth interval class with a range of 0 – 2 with a

value of 1 there are 3 people with a percentage of 23.08%. For more details, see the table below.

Table 3. Distribution of Data from Lying Sitting for 60 Seconds

No	Interval	Absolute Frequency	Relative frequency
1	29 Up	0	0%
2	20 – 28	6	46,15%
3	10 – 19	3	23,08%
4	3 – 9	1	7,69%
5	0 – 2	3	23,08%
Total		13	100%

4. Upright jump test data

Based on the results of the upright jump test, the upright jump results obtained from the 18 samples obtained the highest score of 44 cm and the lowest score of 10 cm. Presented in the list, namely in the first interval class in the range 50 cm and above with a value of 5 there are no students in this interval, in the second interval class in the range 39 – 50 cm with a value of 4 there are 2 people with a percentage of 15.38%, in the third interval class in the range 31 – 38 cm with a value of 3 there are 7 people with a percentage of 53.85%, in the fourth interval class in the range 23 – 30 cm with a value of 2 there are 2 people with a percentage of 15.38%, in the fifth interval class in the range <22 cm with a value of 1 there are 2 people with a percentage of 15.38%. For more details, see the table below.

Table 4. Frequency Distribution of Upright Jump Results Data

No	Interval	Absolute Frequency	Relative frequency
1	50 cm - Up	0	0%
2	39 – 49 cm	2	15,38%
3	31 – 38 cm	7	53,85%
4	23 – 30 cm	2	15,38%
5	<22 cm	2	15,38%
Total		13	100%

5. 1000 meter running test data

Based on the results of the 1000 meter running test, the 1000 meter running results obtained from the 18 samples obtained the fastest score of 6 and the lowest score of 9." Presented in the distribution list, namely in the first interval class in the range S.d - 3'52" with a value of 4 there are no students in this interval, in the second interval class in the range 3'50" - 4'40" with a value of 4 there are no athletes in this interval, in the third interval class in the range 4'57" – 5'58" with a value of 3 there are no athletes in this interval, in the fourth interval class in the

range 5" – 7'30" with a value of 2 there were 9 people with a percentage of 69.23%, and in the fifth interval class in the range 7'20"> with a value of 1 there were 4 people with a percentage of 30.70%. For more details, see the table below.

Table 5. Frequency Distribution of 1000 Meter Running Data

No	Interval	Absolute Frequency	Relative frequency
1	S.d – 3'52"	0	0%
2	3'53" – 4'46"	0	0%
3	4'57" – 5'58"	0	0%
4	5'59" – 7'40"	9	69,23%
5	7'24"> dst	4	30,77%
	Total	13	100%

From the analysis of the data, the researchers tested the truth and the facts were found to be the level of physical fitness of the Club. From the results of the tests and summations carried out by the researcher, there were no very good scores and the good category with a percentage of 0% of the 13 sample people, then in the medium category there were 5 people with a percentage of 38.46% of the 13 sample people, then in the poor category there were 4 people with the percentage was 30.77% of the 13 sample people, while in the very poor category there were 4 people with a percentage of 30.77%. For more details, see the table below.

Table 6. Physical Fitness Level Norms

No	Classification	Intervals	Frequency	Percentage
1	Very Good	22 – 25	0	0%
2	Good	18 – 21	0	0%
3	Medium	14 – 17	5	38,46%
4	Less	10 – 13	4	30,77%
5	Very Less	5 – 9	4	30,77%
	Total		13	100%

It can be summed up, namely the average score of the physical fitness test with a score of 10.80 in the 14-17 interval with a percentage of 38.46%. Judging from the freshness level norms, the category is classified as Medium. By obtaining test results according to the data explained in the data analysis section above, it is known that the level of physical fitness is in the Medium category.

Discussion

This study aims to evaluate the current level of physical fitness among the players of a football club. This aims to understand the level of physical fitness of soccer athletes. This research measures various components of physical fitness, including endurance, strength, agility and speed, using a combination of field tests and laboratory measurements. Results showed a wide range of fitness levels, indicating the need for individualized exercise programs.

Previous research has established benchmarks for physical fitness in soccer players. The relationship between nutritional status and physical fitness in sports clubs has been the subject of research. Research has shown a significant relationship between nutritional status and physical fitness among members of university sports clubs, such as Taekwondo and basketball players. (Cornia & Adriani, 2018; Sungkawa et al., 2022). Additionally, research has been conducted (Alghafary et al., 2022) to establish standard levels for assessing fitness-related elements among junior footballers, emphasizing the importance of maintaining optimal fitness levels for health. Additionally, cross-sectional studies have explored the well-being, physical fitness, and health profiles of boys involved in leisure-time sports club activities, highlighting the potential impact of club participation on the overall health and fitness of young individuals (Larsen et al., 2021).

Literature (Mielgo et al., 2019) physical fitness survey in good category football clubs. Furthermore (Guralnik et al., 1995) physical fitness survey in medium category football clubs. Then quote the same (Caçador et al., 2021) nutritional status and functional capacity in institutionalized elderly people, not directly related to physical fitness surveys in football clubs. The same thing (Westom, 2018) training load monitoring in elite football. not directly related to physical fitness surveys in football clubs. References (Perroni et al., 2019) explaining fitness in young soccer players, is not directly related to physical fitness surveys in soccer clubs. Continue theory (Ghimire et al., 2018) physical fitness survey in medium category football. Then theory (Talhaoui et al., 2021) focusing on the relationship between

physical activity and cognitive function in the elderly is directly related to the physical fitness survey in football clubs. Theory (Jung et al., 2022) cognitive function and daily life activities in the elderly is not directly related to physical fitness surveys at football clubs.. (Caçador et al., 2021) explains a physical fitness survey in a football club. These studies collectively underscore the importance of considering sports club members' physical activity levels to maintain and improve physical fitness.

The implications of this research are varied. Firstly, there is the potential for improved match performance through a fitness program specifically designed to address each player's identified strengths and weaknesses. This individualized approach can result in a more efficient team, where each member is optimized for their specific role. Additionally, this research highlights a correlation between physical fitness and injury rates, implying that increasing fitness levels can reduce injuries, thereby maintaining a more consistent team lineup and potentially improving overall season performance.

One limitation of this study may be the representativeness of the sample. If the sample only includes players from one club, the findings may not be generalizable to other clubs or leagues. Additionally, the testing environment may not fully replicate competition conditions, which may impact the validity of fitness assessments. Another possible limitation is the specificity of the fitness components measured; Certain aspects such as mental resilience and decision making when fatigued, which are critical in football, may not be able to be measured solely by physical tests.

Based on the research findings, clubs should consider implementing more personalized fitness regimens and taking into account the individual needs of players. The coaching staff should also integrate regular fitness assessments into the training schedule to monitor and respond to each player's progress. Additionally, injury prevention strategies, such as warm-up routines and recovery protocols, should be emphasized and adjusted based on collected fitness data.

Future research should include a larger and more diverse sample of players across different clubs and leagues to increase the generalizability of the results. Including match performance data would also be useful to establish a stronger correlation between fitness levels and success on the field. Long-term studies could examine how changes in fitness levels affect a player's career trajectory and longevity in a sport. Additionally, integrating psychological assessments can provide a

more holistic view of a player's overall fitness and readiness to compete.

D. Conclusion

The conclusion of this research underlines the importance of maintaining physical fitness for football players at PS Sipangko Football Club in South Tapanuli Selatan. By increasing their level of physical fitness, they have a greater opportunity to improve their performance in football matches and contribute to achieving better results for the team. Physical fitness is an important factor in achieving success in sport, and this research reinforces that understanding in the context of these football teams.

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F. Conflict of Interest

The author state no conflict of interest

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