

FITNESS PROFILE OF CENTRAL JAVA PARAGLIDING ATHLETES

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Abstract: *Background: Health and fitness, both physically and mentally, are very important in supporting achievements in the sport of paragliding.*

Objective: *to see the fitness level of Central Java paragliding athletes.*

Method: *quantitative survey on 30 paragliding athletes in Central Java. A total of 15 male athletes and 15 female athletes. Data collection techniques using a quality-of-life questionnaire survey and measurement of age, height, weight, blood pressure, HR, MHR, BMI, and endurance, strength and flexibility tests. Statistical analysis using SPSS.*

Results: *showed that the fitness level of Central Java athletes was good in terms of anthropometry, physical and mental health tests, and fitness tests.*

Conclusion: *The Central Java paragliding athlete test showed good health fitness, sufficient physical fitness, and good mental fitness.*

Keywords: *profile, physical, psychological, fitness, paragliding.*

INTRODUCTION

Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. It encompasses all aspects of a person's life, including lifestyle, environmental and genetic factors. (D. Listiarini et al., 2023b). Health does not only focus on the body, but also involves emotional, social, and spiritual well-being. (Stringer, 2023).

The health referred to includes physical and mental health. (Faulkner et al., 2021). Physical health includes optimal body function, resistance to disease, and the ability to carry out daily activities without significant obstacles. While mental health involves emotional balance, the ability to cope with stress, anxiety, and depression. Mental health also includes good cognition and a realistic perception of oneself and the world around us. (Pearson et al., 2013).

Health is the beginning to support physical activity, one of which is by doing sports activities. Sports are physical activities that are done with the aim of improving physical fitness and health. (Bailey, 2017). This activity involves body movements that contract and move muscles, which in turn improves the function of the heart, lungs, and other body systems. (D. Listiarini et al., 2023a). Exercise can also provide psychological benefits, such as reducing stress, improving mood, and increasing overall well-being. (Stubbs et al., 2017).

In addition to supporting health, sports also support achievement. Achievement sports, or competitive sports, are forms of physical activity that are oriented to achieving superior results in a competition or match. (Andrefson et al., 2023). The main focus of this sport is on the development of skills, physical abilities, strategy and superior performance. (Di Corrado et al., 2020). Athletes involved in competitive sports often train intensively to achieve high levels of skill and maintain their peak performance during competition.

One of the sports achievements is paragliding. Paragliding is an air sport that involves flying using a paraglider, a wing made of cloth that is hung on a tubular frame. (Paralayang, 2023). Paragliding is often done in mountainous or hilly areas that have enough wind to support flight. In addition to being an achievement, Paragliding offers a free and thrilling flight experience, and many people enjoy this sport as a hobby or recreational activity. (Wulandari et al., 2022). Nature lovers often find paragliding an exciting way to explore the scenery from above.

In carrying out paragliding sports activities as a support for achievement, athletes need to have good physical, psychological, and health conditions. The importance of knowing the level of athlete health is as a basis before doing physical activities, especially high-risk sports that are expected to have better fitness than other physical activities.

Therefore, researchers studied the health profile of paragliding athletes in Central Java. With the hope that if you already have initial data, it will be easier to provide training programs and see the health conditions of paragliding athletes in Central Java.

METHOD

This study uses survey quantitative. The research sample was 30 senior Central Java paragliding athletes aged 19-41 years. Questionnaire survey of name, gender, date of birth, age, race number, often participating in what race numbers, ever injured or not, health survey12. Measurement of TB, BB, blood pressure, HR, MHR, BMI.

The survey is adjusted to the characteristics of the paragliding sport. The health survey consists of 12 questions that lead to a person's physical and psychological health level. Measurement of TB, BB, blood pressure, HR using tools that have been periodically validated and registered with the Indonesian Ministry of Health. Measurement of endurance using the VO2max beep test. Measurement of the back and legs using the back and leg dynamometer, arm strength using the push up test, and flexibility using the sit and reach measuring tool.

Analysis uses parametric statistics. Analyzes were conducted using the IBM SPSS Statistics for Macintosh, Version 27.0. Armonk, NY: IBM Corp, with a significance level of 0.05.

RESULTS

Characteristics of participants

Athlete survey

Table 1. Participant characteristics

Variables	Group n= 30		
	Mean	SD	p
Age (year)	27.6	5.6	0.494
Height (m)	1.67	0.05	0.064
Weight (kg)	64.5	9.5	0.489
BMI (kg/m2)	23.3	2.06	1.000
MHR (bpm)	192.3	5.6	0.494

Notes. MHR – maximum heart rate, BMI – body mass index

The results of table 1 show that the characteristics of Central Java paragliding athletes have an average age of 27 years with a range of 19-41 years. This shows that this paragliding sport activity is in demand and carried out by various age categories. The results of the BMI of paragliding athletes show 23.3 kg / m2 in the normal category. This shows that athletes are not underweight or overweight. The maximum heart rate (MHR) of athletes has an average of 192 bpm.

Health survey

In this study, a physical and psychological health survey was conducted which was combined into a questionnaire of 12 questions. The results can be seen in table 2.

Table 2. SF-12 Health survey

Variables	Group n= 30		
	Mean	SD	P
Physical	11.9333	1.55216	0.227
Mental	14.2333	1.54659	0.872

From table 2, it is found that there is no difference in physical and mental health of paragliding athletes in Central Java. This shows that the physical and mental conditions of paragliding athletes are normal. In paragliding, physical and mental must be in normal condition, because this sport is classified as an extreme sport so that in its implementation there should be no obstacles, let alone *human error*. Flight activities using this parachute adjust to weather conditions and altitude so that this health survey becomes a reference in the implementation of paragliding.

Athlete fitness profile

The health profile measured in this study is about physical and strength measurements. Measurements include endurance tests using beep tests, strength using back and leg dynamometers, push-ups, while flexibility tests using sit and reach. The parameters used are in accordance with gender and age. The results can be seen in table 3.

Table 3. Health profile of athletes

Variables	Group n= 30		
	Mean	SD	P
Vo2max	34.93	1,072	0 .018
Back strength	101.71	20,507	0 .040
Leg strength	136.57	34,736	0 .234
push up	17.00	3,961	0 .074
flexibility	38.21	4,949	0 .003

From the results of table 3, it can be concluded that the results of the paragliding athlete measurement test show that the average endurance is in the poor category. The strength test measurements for the back, legs, arms are in the good category, and flexibility is in the good category.

DISCUSSION

From the results of this study, it was found that the health level of Central Java paragliding athletes is in the good category, this is indicated by data $p > 0.05$. This is in line with the study that the health level of an athlete can be called good health, so that if they have received the attributes, the athlete already has better fitness than ordinary people. (D. Listiarini, Kurniawan, & Ma'arif, 2024). Another study states that athletes are people who do structured and measurable training programs so that they have better fitness than ordinary people. However, athletes do not always have good fitness, because many athletes do not maintain their bodies, they only do sports that are required for achievement. So many people ignore what sports are for fitness. While fitness is not only for physical but also for mental.

Height and weight were the anthropometric measurements in this study. The results showed that the height and weight of the athletes were normal. (D. Listiarini et al., 2023a). this is in line with the performance of athletes that athletes have normal body postures. but some athletes who have a lot of fat because of the characteristics of the sport sometimes not all are required to have an ideal body. by paying attention to body weight, doing sports will be more comfortable, especially paragliding using flying equipment that is adjusted to height and weight, if you do not pay attention to this it will interfere with flying (Paralayang, 2023).

Not only height and weight, but blood pressure and heart rate are very influential in paragliding. This study also explains that paragliding athletes have normal blood pressure and sufficient resting heart rate. This is in line with the health conditions of athletes who will have good blood pressure and resting heart rate. This study is also in line with paragliding, because paragliding uses parachutes and flies in the air, so it must have good health conditions such as blood pressure, heart rate, physical and psychological health conditions. These conditions will be affected if athletes experience unhealthy conditions, will be disturbed in training or championships. Health conditions will be very good if done regularly and continuously. This is used as monitoring and evaluation for coaches and sports management in helping athletes maintain body condition (D.-H. S. W.-A. N.-I.-N. Listiarini et al., 2024).

Not only that, in this study also conducted measurements of endurance and strength tests and flexibility (Bhutkar et al., 2011). the results of this study indicate that the level of endurance of paragliding athletes is lack-

ing and good strength. this is in line with the fact that exercise is important to maintain aerobic endurance. this is done to see a person's fitness level (D. Listiari, Kurniawan, & Shauma, 2024). athletes are sportsmen who must maintain their fitness because it supports the athlete's performance. (Tuttle et al., 2013). not only endurance, but strength is very important because paragliding is not easy to do and requires good strength and coordination, so that aerodynamics occur in flight. With this paragliding athlete fitness survey, it is hoped that the portion of training can be added to support paragliding. Added to the significant differences between male and female paragliding athletes in their checks.

Basically, sports have their own goals, such as paragliding which can be for recreation and also achievement. (Wulandari et al., 2022). paragliding sports have aspects such as aerobic endurance, speed, strength, coordination, and accuracy. therefore, physical condition is the main thing in preparing athletes for achievement, so that in providing training programs it is also based on the condition of the athlete individually (Balyi et al., 2013; D. Listiari, Kurniawan, & Shauma, 2024).

From the study above, there are several weaknesses, including the need for clinical checks to determine the biochemical conditions in the bodies of paragliding athletes. In addition, it is necessary to improve the performance of paragliding athletes in Central Java by carrying out training programs that are adjusted to the race numbers of each athlete. Further research is needed after the initial checks on paragliding athletes in Central Java, so that the training carried out can achieve the expected targets.

CONCLUSION

From this study, it can be concluded that the profile of paragliding athletes in Central Java is quite good, but there needs to be regular training, not only physical but also mental/psychological training so that the target achievement in a competition is achieved with maximum results.

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