



A Case Study of Athletes' Physical Condition Before the DKI Jakarta Pelatda for Water Ski and Wakeboard

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Abstract

The descriptive method employs a qualitative sort of research methodology. 16 water ski and wakeboard athletes 9 men and 7 women made up the study's population and samples. Tests and measurements are used in data gathering techniques, including the measuring of weight using scales. physical condition tests: flexibility using the sit-and-reach test, agility using the shuttle run test, muscle endurance using sit-ups and push-ups, limb explosive power performing vertical jump tests, arm power testing with the use of throw medicine balls, test balance using the standing stroke, an aerobic using a 300 meter sprint, and endurance performing the bleep test. Overall data analysis utilizing Microsoft Excel 2019 and quantitative descriptive analysis methodologies According to the study's findings, physical fitness is a crucial aspect in determining an athlete's success, especially for DKI Jakarta Provincial Water Ski and Wakeboard Athletes who are training to become DKI Jakarta Regional Athletes for PON 2024. To improve athlete performance, more research must be done on environmental influences, psychological issues, athlete psychology, and related topics.



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INTRODUCTION

The nations of the world are fighting with one another to advance their sport with the aim of not only advancing achievements but also serving as a national unifying force. The nation of Indonesia, which is still developing, is interested in sports. This is following Chapter VI Article 20 of the Law of the Republic of Indonesia number 3 of 2005 regarding the National Sports System (SKN), which states that: (1) Achievement Sports is intended as an effort to improve the ability and potential of sportsmen to increase the dignity and dignity of the nation; and (2) Sports achievements are carried out through a tier-based and ongoing coaching and development process with the aid of science and technology (UU No 3 Tahun 2005 2005).

Sports are physical endeavors or motions that people of all ages—from young children and teenagers to the elderly—can engage in. No one should be denied the human right to participate in sports. Sport is thought to be able to offer a variety of advantages and is thought to be crucial to human existence. Sport is a sort of organized physical exercise that involves competing against others or oneself for enjoyment or success. Human life and sports cannot be separated; when exercising, each person has different objectives; some pursue success, physical health, and leisure (Rilastiy 2019; Sukadiyanto 2011). This study, however, solely looks at water ski performance in terms of physical performance. One of the elements that must constantly be adequately trained and developed is performance (Fett, Ulbricht, and Ferrauti 2020; Malm, Jakobsson, and Isaksson 2019). This is because physical ability is the foundation of a water ski athlete's ability to compete in a match. To generate a solid competition technique, a water ski champion must be in good physical shape. Each sport has different physical,

technical, and tactical requirements. The importance of each of these elements depends on the particular sport's discipline and the technique employed (Schneebeli et al. 2020; Willibald et al. 2021). As an illustration, the significance of the physical, technical, and tactical elements of water ski differs from that of other sports, as do the match numbers (Bompa and Buzzichelli 2019). This discrepancy is most likely caused by the large age range in which athletes perform at their best.

Numerous elements, both internal and external, affect people's ability to accomplish sporting success. Each element undoubtedly plays a crucial role in achieving goals. Sports accomplishments are not solely dependent on technical and physical aspects. It is difficult to increase an athlete's performance, so specific advice is required, such as providing an enjoyable training schedule, particularly in physical training schedules, particularly in water ski. A sort of activity requiring ability or agility while ski on the water, water ski is well-known among international audiences (Fachrezzy et al. 2021). Without the backing of courage and consistent practice, it seems very tough, but this activity is difficult and can entertain or satisfy people who observe it, let alone participate in it.

A technological approach and attention to athletes' physical condition are required at the highest level to compete with other nations and achieve successes in the sport of water ski, which is not solely dependent on good breeding and forcing practices. As a measurable sport, water ski allows for accurate measurement and prediction of each supporting component of performance and training results at game time. It is necessary to make preparations to consistently evaluate and identify the outcomes of each performance during training and competition, as well as the optimal

abilities of each individual if the accomplishments of Indonesian water ski athletes are to remain consistent at the national and international level competitions.

Athletes that compete in water ski may encounter physical, technical, tactical, and psychological challenges in achieving their best performance. These elements are interconnected and inextricably linked. Every athlete must comprehend and overcome psychological obstacles as well as physical limitations throughout a game. Every athlete needs a combination of broad physical skills, such as endurance, strength, speed, and flexibility, as well as good movement techniques for water ski, as well as psychological components, such as motivation, stress, anxiety, and self-confidence. To prepare for the DKI Jakarta Regional Plate, researchers conducted scientific investigations based on this phenomenon in the form of data regarding the physical condition profile of water ski and wakeboard competitors

METHODS

This study employed a qualitative descriptive research methodology that included tests and observations to gauge the physical fitness of water ski and wakeboard competitors.

Participants

The complete Water Ski and Wakeboard Team, which was organized at DKI Jakarta, served as the study's population. 16 athletes from the DKI Jakarta Provincial Water Ski and Wakeboard Athletes, comprising 9 sons and 7 females, served as the study's samples. The FIK UNJ Laboratory, Jl, was the site of this study. Rawamangun, Pemuda No. 10, East Jakarta.

Sampling Procedures

Purposive sampling was employed in this study's sampling technique, which took the characteristics of the sample into account once the sample had completed at least one year of training with the DKI Jakarta Provincial Water Ski and Wakeboard Association.

Materials and Apparatus

Tests and measurements are used in data gathering techniques, including (i) the measuring of weight using scales. ii) physical condition tests: flexibility using the sit-and-reach test, agility using the shuttle run test, muscle endurance using sit-ups and push-ups, limb explosive power performing vertical jump tests, arm power testing with the use of throw medicine balls, test balance using the standing stroke, an aerobic using a 300-meter sprint, and endurance performing the bleep test.

Procedures

The procedures used in this study are as follows: I the researcher first performs measurements and tests involving anthropometry and physical condition; (ii) researchers classify and categorize data; and (iii) the test was implemented at the FIK UNJ Laboratory, Jl. Rawamangun, Pemuda No. 10, East Jakarta.

Design or Data Analysis

A descriptive analysis of percentages was employed in this study's data analysis. After the data were collected, the process of employing quantitative descriptive analysis methodologies and total data analysis with Microsoft Excel 2019 was then continued to derive conclusions from the study.

RESULT

1. Characteristics Of Responders

The following figure shows the gender, age, and body mass index (BMI) characteristics of responders to the physical condition of water ski and wakeboard athletes in preparation for the DKI Jakarta Regional Council:

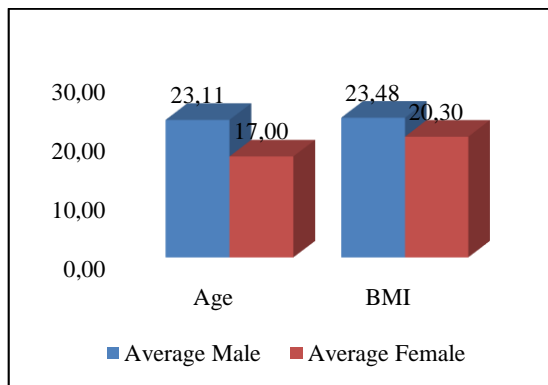


Figure 1. male and female average age values and BMI histograms

The average age of water ski and wakeboard competitors is 23.11 male and 17 female, according to figure 1. Regarding the BMI of the 20.30 daughters and 23.48 sons. The following descriptive analysis results also show the examination of physical condition, which includes speed, agility, muscular endurance, leg power, arm power, flexibility, balance, an aerobic, and Vo2max

2. Data description

The following table contains average values and standard deviations based on descriptive analysis of frequencies connected to tests and measurements of physical conditions:

Table 1. The findings of the descriptive analysis of the standard deviation and average values of the male and female physical condition are as follows:

Variable	Male		Female	
	Mean	SD	Mean	SD
Speed	3,38	0,25	4,06	0,33
Agility	12,86	0,90	14,26	0,99
Muscle Endurance	45,56	13,18	50,43	5,94
Leg Power	53,11	3,22	37,86	5,58
Arm Power	3,24	0,37	2,42	0,21
Flexibility	14,44	12,58	18,86	7,17
Balance	10,34	9,22	19,78	19,23
Anaerobic	72,03	9,33	97,32	10,51
Endurance	30,54	5,95	27,31	2,60

Table 1 on the physical profile of water ski and wakeboard athletes in preparation for the DKI Jakarta Regional Plate consists of tests: (i) speed obtained the average score for men of 3.38 while for a female of 4.06 seconds, standard deviations obtained 0.25 and 0.33 respectively; (ii) agility obtained the average value for men of 12.86 seconds and female of 14.29 while standard deviations obtained 0.90 and 0.99 respectively; (iii) strength obtained the average score for men of 12.86 seconds and (v) Arm power yielded an average value of 3.24 meters per man for sons whereas it was 2.43 meters for female. The standard deviation for males is 3.22 and for females, it is 5.58. The average value of each for men was 14.44 cm, while for females it was 18.86 cm. The standard deviation for sons is 0.37, and for females, it is 50.21. The average value for the balance was 10.34 seconds for males and 19.78 seconds for females, respectively. The standard deviation for sons is 12.58 and for a female is 7.17. The average value for an aerobic test was 72.03 seconds for each son, whereas it was 97.32 seconds for

the princess. The standard deviation for male is 9.22 and for females is 19.23. The standard deviation for sons is 9.33, while it is 10.51 for daughters. For (ix) endurance, men averaged 30.54 ml/kg/min, while females averaged 27.31 ml/kg/min. Male standard deviation is 5.95, whereas the female standard deviation is 2.60.

DISCUSSION

The physical component of water ski and wakeboard in the context of training for the DKI Jakarta Pelatda consists of a flexibility test using a sit-and-reach test, an agility test using a shuttle run test, a muscle endurance test using sit-ups and push-ups athletes doing a test for 1 minute, a limb explosive power test conducting a vertical jump test, and an arm power test using a Throat Power test.

In essence, these components require a continuous process of exercise provision and attention to technological advancements. so that both male and female athletes can benefit from the study's findings and improve their performance. The purpose of this study was to ascertain the physical profile of the DKI Jakarta water ski and wakeboard team. To build a resource manual for coaches and sports scientists, some of the first values discovered via the study will be included in the literature. All sports activities, especially achievement sports, require physical condition as a fundamental component (Kashuba et al. 2021; Moskalenko et al. 2020; Sáez, Solabarrieta, and Rubio 2020; Savliuk et al. 2020). Every accomplished sports athlete must be in the necessary physical condition.

The findings of this study are consistent with earlier research, specific research by several researchers, including (Adams et al. 2020; Borthwick, O'Connor, and Kennedy 2021; Kampling

et al. 2022; Yoshimura et al. 2021) The findings of this study demonstrate that, in addition to the social environment, psychology, and other factors related to determining athlete achievement, the quality factor of the physical condition determines qualified achievement.

Physical fitness is a skill that is directly related to the requirements of a specific sport (Fachrezzy et al. 2020; H. Indrawira, U. Maslikah, G. Jariono, H. Nugroho 2021; Hermawan et al. 2020; Jariono et al. 2020; Nugroho et al. 2021). There are actually a lot of physical condition-related factors that interact to affect athletic success (Franagal, Ligeza, and Smal 2020; Liusnea 2020; Rahmi and Bachtiar 2020; Romanova et al. 2022). One of the most crucial factors in the physical condition is the ability, thus processing and measuring it is necessary to determine whether development has been made. since the physical requirements for each sport vary. Each specialized activity or discipline calls for unique, distinct physical capabilities

CONCLUSION

As a consequence of the study's findings, it can be said that one way to assess athletic accomplishments is to establish the physical condition profile of water ski and wakeboard competitors as they get ready for the DKI Jakarta Regional Pelatda.

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