ISSN : 2087-927X (print)
ISSN : 2685-0516 (online)
Altius: Journal of Sports and Health Science
Volume 12, No. 2, November 2023, pp. 455-465
http://dx.doi.org/ 10.36706/altius.v12i2.22896

Survey on fitness levels of wushu athletes at garuda fighting camp Palembang

M. Robby Alza [1,*] , Syafaruddin [2] , Syamsuramel [3]

Physical Education and Health Study Program, Universitas Sriwijaya

[1] robyalza02@gmail.com *; [2] syafaruddin@fkip.unsri.ac.id ; [3]syamsuramel@fkip.unsri.ac.id

ABSTRACT

This research aims to determine the level of physical fitness of wushu athletes at the Garuda Fighting Camp Palembang club. The type of research used in this research is quantitative descriptive using survey methods through tests and measurements. The sample used in this research was 20 Garuda Fighting Camp wushu athletes aged between 16 and 19 years. This research uses a total sampling method, namely a sampling method where the number of samples and population used are the same. The data collection technique in this research uses a survey method and an aerobic endurance measurement test technique using the Indonesian Physical Fitness Test (TKJI) research results menu suggest that in the speed test component (60 m running) the athlete has a score of 7.50 which is in the good category. In the abdominal muscle strength component (Sit ups) male athletes had an average of 51.30, which is in the very good category. The athlete's hand muscle strength component (Pull ups) has a value of 12,750 which is in the medium category. The athlete's leg muscle explosive power component (vertical jump) has a value of 43.80, which is in the very poor category. The endurance component (1200 meter running) has a value of 6.9350 in the poor category. From the results of this research it can be concluded that the physical condition of the Garuda Fighting Camp Palembang club wushu athletes aged 16-19 is overall in the medium category, and still needs to be improved so that wushu athletes have better speed, strength, muscle endurance, explosive power and lung and heart endurance.

Keywords: Physical Conditions, Athletes, Survey, Wushu

ARTICLE INFO

Article History:
Accepted : 10th October 2023
Approved : 15th December 2023
Available *Online* January 2024

Correspondence Address:
M. Robby Alza
Physical education and health, Universitas Sriwijaya
Jl. Raya Palembang - Prabumulih indralaya Ogan Ilir 30662,
Email: robyalza02@gmail.com

INTRODUCTION

Physical fitness can be defined as a person's ability to carry out daily activities with strength without excessive fatigue. And still have enough energy to enjoy free time, to meet unusual circumstances and unusual conditions and unexpected circumstances (Akre & Neha, 2015) As explained by (Degele Shomoro & Soumitra Mondal, 2014) good physical fitness is actually the capacity of an individual's body to carry out activities consistently without causing significant fatigue, Physical fitness is an important part of every human activity. When someone has a good level of physical fitness, they can perform daily activities consistently without feeling serious fatigue. On the other hand, if someone does not have good physical fitness, that person will feel tired, lazy and susceptible to disease. Physical fitness can also be

interpreted as the ability to carry out activities without feeling tired and still have the energy to carry out other activities. Physical fitness can also be interpreted as an individual's ability to carry out daily life without feeling excessive fatigue but still able to do other light work**.** (Suharjana, 2013) Physical fitness also has the function of increasing a person's togetherness, ability and perseverance to improve the quality of their work. As explained by keeping the body fit can be done by exercising consistently and doing it for a minimum of 150 minutes every week. As said by (Santosa Giriwijoyo, 2017) that doing exercise with repetitions 3-5 times every week will help improve a person's health.

There are several parts of physical fitness that cannot be separated from well-being and ability. According to (Arifin, 2018) part of real health is perseverance, speed, fitness, coordination, body arrangement, energy. According to (Meirizal, 2017) physical fitness is a person's ability to complete daily activities without experiencing serious deficiencies, but in the same time have some remaining energy left to do different activities. The state of physical fitness is related to wellbeing, namely a condition of well-being both intellectually, sincerely and socially. Actual health related to health requires an appropriate level of health from four specific parts of actual health: heart health, lungs and blood flow, fat, muscle strength and flexibility, while the components of physical fitness are related to skills, namely speed, agility/ dexterity, balance, speed of response, flexibility and coordination.. According to (Andriyani F.D., 2017)

In general, the level of physical fitness is actually influenced by two main factors, namely external factors and internal factors. Internal factors are factors that are inherent and permanent to a person, such as heredity, age and gender. Physical fitness can be determined by several factors, one of which is by using a healthy lifestyle. How to behave in a healthy daily life, every type of movement that is visible or invisible, is related to maintaining and improving health. (Setyo Kriswanto, 2019) Wushu is a branch of martial arts or fighting techniques originating from China (Ma, Sun, et al., 2017) from various martial arts schools which are combined into 1 under the name wushu. Wushu prioritizes balance, namely hard, smooth movements, health and art. (Martono, 2018). Wushu is the science of martial arts and fighting techniques using punches, throws, squeezes and using elements of the whole body in training, mobilizing the human body's abilities and training the ability to use traditional weapons (Yuwono & Setiawan, 2014). Wushu can also be interpreted as a resistance or fighting technique. This is a traditional Chinese martial skill. Wushu has gone through various adaptation efforts so that it is considered part of an international sport by the International

Wushu Federation (IWUF). As a sport, wushu has two criteria, namely taolu (stances) and sanda/sanshou (fighting) (Bhyantari & Muliarta, 2016).

Wushu is not yet very popular among Indonesian people, but Indonesia's Wushu achievements at the world level are indeed extraordinary. Seeing the series of achievements that Indonesia has achieved in wushu sport, wushu is a sport that is still wide open to achieve the proudest achievements. Not only that, the development of wushu in several regions in Indonesia is also growing rapidly. The sport of wushu in South Sumatra, especially in the city of Palembang, has attempted to carry out coaching at the Palembang wushu club, but the achievements of the Garuda Fighting Camp Palembang club athletes have not experienced significant progress or have not shown optimal performance in either the taolu or sanda categories. In the sport of wushu there are 2 classes of competition, namely art and fighting, both of which require good physical fitness conditions to help achieve the expected achievements. In the sport of wushu, according to the number, there are several components of physical fitness that are dominant and must be trained well. Especially for arts/movement demonstrations (taulu) and fighting (sanda) numbers, good physical fitness is required. There are several components of physical fitness that cannot be separated from health and skills, namely endurance, speed, agility, strength, power, so, wushu athletes from the Garuda Fighting Camp club should have good physical fitness as a means of supporting them to achieve achievements. Based on the explanation above, ideally, the longer they participate in training, the better/higher their physical fitness will be. The success of an athlete in achieving good physical fitness is determined by many factors, including: 1. Nutritional status 2. Rest pattern 3. Lifestyle 4. Exercise 5. Parental support 6. Motivation

Based on the observations made by researchers on Garuda Fighting Camp Palembang club athletes in training and in competitions for Garuda Fighting Camp Palembang club athletes, it appears that the level of physical fitness of athletes is still low, this is the problem in this research. By looking at this problem, the author wants to know and obtain data by conducting research on a survey of the physical fitness level of athletes at the Garuda Fighting Camp Palembang club.

METHODS

Types and Design of Research

The type of research used in this research is quantitative descriptive using survey methods. (Suyudi, 2019)said that surveys are quantitative research that uses the same structured

questions for everyone and records, processes and analyzes Physical fitness is a variable in this research.

Research variable

The variable in this study is physical fitness where physical fitness is the ability of *Garuda Fighting Camp Palembang wushu athletes* to carry out daily activities without feeling significant fatigue and still having energy remaining to carry out other activities. physical fitness of wushu athletes *Garuda Fighting Camp* will be measured using the Indonesian physical fitness test (TKJI).

Research Population

Population is a generalized area or the entire character of something being studied (Retnawati, 2017)Saturated sampling technique is a sample determination technique if all members of the population are used as samples. (Niswara, Muhajir, et al., 2019)because it is often done when the population is relatively small or few, such as less than 30 individuals, or when researchers aim to make generalizations with relatively small errors. Based on the description above, the target population that will be studied by the author is *Garuda Fighting Camp wushu athletes* , totaling 20 people aged between 16 and 19 years.

Sample

A sample is a portion of the total object to be researched or evaluated and has certain population characteristics. (Retnawati, 2017)The samples used in this research were 20 *Garuda Fighting Camp wushu athletes* aged between 16 and 19 years. This research used a total sampling method, namely a sampling method where the number of samples and the population used were the same.

Data collection technique

Data collection techniques are the process of searching and collecting information needed by researchers. Data collection is a factor that researchers often feel tired and sometimes find it difficult to collect research data. a data collector needs to visit many people from house to house, from school to school, or from one location in a region (district or province) to another location, it takes a lot of time, energy, money and thinking when collecting data.(Winarno, 2018). In this research, the data collection technique used a survey method with an aerobic endurance measurement test technique using the Indonesian Physical Fitness Test (TKJI .

Research Instrument

Research instruments are tools that can be used to measure observed natural and social phenomena.(Sugiyono, 2014). The research instrument used in this study uses the Indonesian physical fitness test (TKJI) aged 16-19 years, the source of the tests and measurements in this research (Nurhasanan, 2013).

RESULTS AND DISCUSSION

Results

This research was carried out directly at the Jakabaring athletic stadium which is located on Jl. Glora Sriwijaya, 15 Ulu, Sebrang Ulu I District, Palembang City, South Sumatra 30267 ages 16-19 starting on July 14 until finished. The research method used in the results of this research using descriptive research which is described with appropriate results and facts obtained. This research is entitled Survey of Physical Fitness Levels of Wushu Athletes at the Garuda Fighting Camp Palembang Club to be the research subjects. The variable in this research is the state of physical fitness. And then the research is carried out on site until it is finished. Then the next step is data tabulation and data processing through descriptive statistical calculations.

Tabel 1: Statistical results of the physical condition of wushu athletes from the Garuda Fighting Camp Palembang club

	N	**Range**	**Minimum**	**maximum**	**Sum**	**mean**	
	Statistic	Statistic	staistic	staistic	Statistic	Stistic	Std,error
run 60 m	20	39	7,32	7,71	7,71	7,5085	,02427
Pull up	20	7,00	10,00	17,00	17,00	12,7500	,40959
Sit up	20	17,00	42,00	59,00	59,00	51,3000	,93651
Vertical jump	20	25,00	31,00	56,00	56,00	43,8000	1,40974
Lari 1200 m	20	2,03	6,12	8,15	8,15	6,9305	,13406
Valid N (listwise)	20						

above it can be seen that N is the number of wushu athletes from the Garuda Fighting Camp Palembang club in the speed test component (60 m running). The athletes had a score of 7.50 which is in the good category. In the abdominal muscle strength component (Sit ups) male athletes had an average of 51.30, which is in the very good category. The athlete's hand muscle strength component (Pull ups) has a value of 12,750 which is in the medium category. The

athlete's leg muscle explosive power component (vertical jump) has a value of 43.80, which is in the poor category. The endurance component (1200 meter running) has a value of 6.9350 in the very poor category.

Normality test

This normality test uses the One KS Test method to determine whether the data that has been sampled is normal or not. The normality test on the physical condition of Garuda Fighting Camp Palembang wushu club athletes aged 16-19 years was calculated using SPSS 2.9 with the aim of finding out whether the residual values were normally distributed or not. A good regression model has residual values that are normally distributed. The basis for decision making is if the significance value is > 0.05. So the residual value is normally distributed, if the significance value is <0.05. So the residual value is not normally distributed.

The normality test for wushu athletes from the Garuda Fighting Camp Palembang club is as follows:

Tebel 2: Normality Test based on Physical Condition Data of Garuda Fighting Camp Palembang Wushu Club athletes

			run 60 m	**Pull up**	**Sit up**	**Verical jump**	**run 1200 m**
N			20	20	20	20	20
Norma parameters [a.b]	mean		7,5085	12,75000	51,3000	43,8000	6,9305
	Std.deviation		,10854	1,83174	4,14348	6,30455	,59954
Most extream diffirences	Absolute		,136	,180	127	,114	,182
	Positive		,136	,180	107	,114	,182
	negative		-114	-,120	-127	-,103	-,097
Tes statistic			136	,180	127	,114	,182
Asym.sig.(2-tailed)[e]			200[d]	,088	,200[d]	,200[d]	,082
Monte cario.sig (2-tailed)[e]	Sig.		,416	,082	,530	530	,078
	99% confidence interval	Low bound	,403	,075	,517	517	,071
		Upper bound	,429	,089	,542	542	,085

Data on physical condition from the results of speed tests (60 meter running) for wushu athletes from the Garuda Fighting Camp Palembang club had an average of 7.50 in the good category. The data from the 60 meter running test results are as follows:

Table 3 . 60 M Running Physical Condition Test Results Data

	performance	***athlete***	***category***
1.	<7.2	0	Very good
2.	7.3 - 8.3	20	Good
3.	8.4 – 9.6	0	Enough
4.	9.7 – 11.0	0	Not enough
5.	11.1 etc	0	Very little
	Amount	20	

Data on fitness conditions from the results of abdominal muscle strength tests (Sit ups) of Garuda Fighting Camp Palembang club wushu athletes have a score of 51.30 which is in the good category, the data on the results of the abdominal muscle strength test (Sit Up) are as follows:

Table 4 . Abdominal Muscle Strength Physical Condition Test Results Data (Sit Ups)

	performance	***athlete***	***category***
1.	41 – above	20	Very good
2.	30 – 40	0	Good
3.	21 -29	0	Enough
4.	10 – 20	0	Not enough
5.	0 - 9	0	Very little
	Amount	20	

Data on fitness conditions from the results of the hand muscle strength test (Pull up) of Garuda Fighting Camp Palembang club Wushu athletes has a score of 12,750 which is in the medium category. The results of the hand muscle strength test (Pull Up) are as follows:

Table 5. Pull Up Physical Condition Test Results Data

	performance	***athlete***	***category***
1.	19 – above	0	Very good
2.	14 – 18	6	Good
3.	9 – 13	14	Enough
4.	5 – 8	0	Not enough
5.	0 - 4	0	Very little
	Amount	20	

Data on the state of fitness from the results of the leg muscle explosive power test (Vertical Jump) of Garuda Fighting Camp Palembang wushu club athletes had a score of 43.80, which is in the poor category. As for the data on the results of the muscle explosive power test ngkai (Vertical Jump) as follows:

Table 6. Vertical Jump Physical Condition Test Results Data

	performance	***athlete***	***category***
1.	73 cm and above	0	Very good
2.	60 – 72 cm	0	Good
3.	50 – 59 cm	4	Enough
4.	39 – 49 cm	12	Not enough
5.	38 cm and below	4	Very little
	Amount	20	

Data on fitness conditions from the results of endurance tests (1200 meter running) for Garuda Fighting Camp Palembang club athletes have a score of 6.9350 which is in the very low range. The endurance test results data (1200 meter running) are as follows:

Table 7. Physical Condition Test Results Data for Running 120 0 Meters

	performance	***athlete***	***category***
1.	SD – 3.14	0	Very good
2.	3.15 – 4.25	0	Good
3.	4.26 – 5.12	0	Enough
4.	5.13 – 6.33	2	Not enough
5.	6.34	18	Very little
	Amount	20	

Discussion

Based on the results of the overall overview table and diagram above, it can be concluded that of the 20 athletes who took the Indonesian Physical Fitness Test (TKJI), the overall physical condition score of the Garuda Battle Camp Palembang club wushu athletes was in the good category. medium category. Good physical fitness is an important aspect that every athlete must have in all sports, especially wushu. A body that has a good level of physical fitness will not experience obstacles in carrying out daily activities (Ratna, 2013) (Maximum performance can be achieved if an athlete has good physical fitness, physical fitness is one of the most important elements in the sport of wushu. Therefore, physical fitness must be in top

condition so that athletes can achieve maximum performance and physical fitness is the main thing. components that athletes must have so that athletes can achieve achievements as explained by (Destriana,et al., 2022). Kindness will support success. Thus, an athlete will not be able to achieve maximum performance if his physical fitness is poor. It can be seen that physical fitness is one of the factors that supports the success of athletes in achieving maximum performance, even though in reality there are still athletes on the field who have good fitness. Good training does not necessarily produce maximum performance, and vice versa, with a good level of sports fitness it is hoped that athletes can improve their performance in running a match so as to obtain maximum results as explained by (Zubaidah, Syafarudin, et al., 2021) physical fitness. athletes have weaknesses, so in this case the athlete's performance will not be optimal and will not last long in a competition, the athlete will experience excessive fatigue so that it is difficult to think when competing, fall easily, give up easily, and other things that cause the athlete to experience defeat. while competing.

Therefore, an athlete must maintain his eating and drinking patterns because these are the main needs of an athlete or sportsman. Physical fitness is something that needs to be improved because when exercising for a long time, replacing fluids in the body with air is not enough. , because air does not replace electrolyte fluids lost through sweat, as an athlete you must be able to keep your body hydrated so as not to affect the athlete's performance or achievements (Kusumawardani, 2017).

CONCLUSION

From the results of the research and data analysis above, it can be concluded that the physical condition of Garuda Fighting Camp Palembang club Wushu athletes is overall in the medium category, and still needs to be improved so that Wushu athletes have speed, strength and muscle endurance, explosive power, and even better lung and heart endurance.

REFERENCES

Akre, A., & Neha, B. (2015). Co- Relation between Physical Fitness Index (PFI) and Body Mass Index in Asymptomatic College Girls. *Journal of Exercise Science and Physiotherapy*, *11*(2), 129. https://doi.org/10.18376//2015/v11i2/67712

Andriyani F.D., N. (2017). *Tes dan Pengukuran untuk Evaluasi Pendidikan Jasmani dan Olahraga*. https://www.researchgate.net/publication/315692988_Tes_dan_Pengukuran_untuk_Evaluasi_Pendidikan_Jasmani_dan_Olahraga

Arifin, Z. (2018). Pengaruh Latihan Senam Kebugaran Jasmani (Skj) Terhadaptingkat Kebugaran Siswa Kelas V Di Min Donomulyo Kabupaten Malang. *Journal AL-MUDARRIS*, *1*(1), 22. https://doi.org/10.32478/al-mudarris.v1i1.96

Bhyantari, N. P. R., & Muliarta, I. M. (2016). Kapasitas Aerobik Mahasiswa Pemain Wushu Lebih Baik daripada Mahasiswa bukan Pemain Wushu di Universitas Udayana. *E- Jurnal Medika*, *5*(5), 1–8.

Degele Shomoro, & Soumitra Mondal. (2014). Comparitive Relationships of Selected Physical Fitness Variables among Different College Students of Mekelle University Eithopia Africa. *International Journal of Physical Education, Fitness and Sports*, *3*(1), 07–14. https://doi.org/10.26524/1412

Destriana, Elrosa, D., & Syamsuramel, S. (2022). Kebugaran Jasmani Dan Hasil Belajar Siswa. *Jambura Health and Sport Journal*, *4*(2), 69–77. https://doi.org/10.37311/jhsj.v4i2.14490

Kusumawardani, M. P. (2017). *Analisis Tingkat Dehidrasi Atlet Pencak Silat PPLPD Kota Madiun Universitas Negeri Surabaya - Neliti*. https://www.neliti.com/publications/248565/analisis-tingkat-dehidrasi-atlet-pencak-silat-pplpd-kota-madiun-universitas-nege

Ma, X., Sun, W., Lu, A., Ma, P., & Jiang, C. (2017). The improvement of suspension training for trunk muscle power in Sanda athletes. *Journal of Exercise Science and Fitness*, *15*(2), 81–88. https://doi.org/10.1016/j.jesf.2017.09.002

Martono, C. (2018). RANCANGAN BENTUK PENGENDALIAN YANG TEPAT DENGAN GAYA KEPEMIMPINAN YANG ADA PADA PELATIHAN NASIONAL WUSHU. *Jurnal Ilmiah Mahasiswa Universitas Surabaya*, *7*(1), 109–124.

Meirizal, U. (2017). Aplikasi Aktivitas Fisik Siswa SD Sebagai Upaya Peningkatan Kebugaran Jasmani. *Aplikasi Aktivitas Fisik Siswa SD Sebagai Upaya Peningkatan Kebugaran Jasmani*, *13*(1), 104–116.

Niswara, R., Muhajir, M., & Untari, M. F. A. (2019). Pengaruh model project based learning terhadap high order thinking skill. *Mimbar PGSD Undiksha*, *7*(2), 85–90. https://doi.org/https://doi.org/10.23887/jjpgsd.v7i2.17493

Nurhasanan. (2013). *TES DAN PENGUKURAN PENDIDIKAN OLAHRAGA*. https://vdocuments.net/tes-dan-pengukuran-pendidikan-olahraga-drs-nurhasan-mpd.html?page=1

Ratna, P. (2013). *TINGKAT KEBUGARAN JASMANI MENURUT TES KEBUGARANJASMANI INDONESIA ATLET PUTRI USIA 13-15 TAHUN KLUB BOLA VOLI GANEVO YOGYAKARTA*.

Retnawati, H. (2017). Teknik Pengambilan Sampel. *TEKNIK PENGAMBILAN SAMPEL*, *13*(3), 1. http://staffnew.uny.ac.id/upload/132255129/pengabdian/15-Teknik Penyampelan alhamdulillah.pdf

Santosa Giriwijoyo. (2017). *Fisiologi kerja dan olahraga: fungsi tubuh manusia pada kerja dan olahraga*. http://opac.library.um.ac.id/index.php?s_data=bp_buku&s_field=0&id=62908&mod=b&cat=3

Setyo Kriswanto, E., Prasetyawati Tri P.S., I., Meikahani, R., & Suharjana, F. (2019). *Smartphone: Social Attitude and Healthy Lifestyle*. *278*(YISHPESS), 21–25. https://doi.org/10.2991/yishpess-cois-18.2018.6

Sugiyono. (2014). Metode Penelitian kuantitatif, kualitatif dan R & D / Sugiyono. In *Bandung : Alfabeta*. https://opac.perpusnas.go.id/DetailOpac.aspx?id=911046

Suharjana. (2013). Analisis Program Kebugaran Jasmani pada Pusat-Pusat Kebugaran Jasmani di Yogayakarta (Suharjana). *ANALISIS PROGRAM KEBUGARAN JASMANI PADA PUSAT-PUSAT KEBUGARAN JASMANI DI YOGYAKARTA*, 135–149. https://doi.org/https://doi.org/10.21831/medikora.v11i2.2813

SUYUDI, A. (2019). *Survei tingkat kesegaran jasmani pada siswa ekstrakurikuler futsal SMK Negeri 2 Makassar*. http://eprints.unm.ac.id/id/eprint/13030

Winarno. (2018). Buku Metodologi Penelitian. In *UM Press*. https://www.researchgate.net/publication/322652202_Buku_Metodologi_Penelitian

Yuwono, Y., & Setiawan, A. P. (2014). Perancangan Interior Pusat Informasi Dan Pelatihan Wushu Di Surabaya. *Jurnal Intra*, *2*(2), 81–86.

Zubaidah, Syafarudin, Victorian, A. R., Solahuddin, S., & Iswana, B. (2021). Binaan Bank Sumsel Babel Palembang. *Profil Kebugaran Jasmani Atlet Pencak Silat Binaan Bank Sumsel Babel Palembang*. https://doi.org/10.24036/patriot.v%vi%i.783