



Analysis of Athletes Physical Conditions During the Covid 19 Pandemic

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Abstract

The Covid 19 pandemic has hit the world. Athletes are athletes who strive to provide maximum performance. With the current pandemic situation, problems arise regarding the physical condition of athletes, especially athletes from the PGRI Mahadewa University Indonesia. Students who work as athletes do not know the extent of their physical condition during the Covid 19 pandemic. The purpose of this study was to determine the physical condition of athletes during the Covid 19 pandemic. The research sample was 30 male athletes from the University of PGRI Mahadewa Indonesia. Based on the physical condition examination, the results showed that the average physical condition of the athletes which consisted of cardiovascular endurance was 34 ml/kg/mt (less), right hand muscle strength was 46.7 kg (good), left hand muscle strength was 38.7 kg (moderate), the tensile strength of the shoulder muscles is 15.7 kg (very less), the thrust of the shoulder muscles is 26.0 kg (moderate), the strength of the back muscles is 60.3 kg (less), the strength of the leg muscles is 154.6 kg (moderate), explosive power leg muscles 48 cm (less), arm muscle endurance 53 x/minute (moderate), body balance 38 seconds (good), body speed 4.80 seconds (less), reaction speed to light stimulus 1.394 seconds (less), reaction speed sound stimulus 1.193 seconds (less), body agility 15.02 seconds (less), body flexibility 20.60 cm (very little), and body fat content of 21% (slightly high). Based on these results, of the 15 components outside of body fat levels, 2 physical components are at a very low level, 7 physical components are at a low level, 4 components are at a moderate level, and 2 physical components are at a good level.

How to Cite

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INTRODUCTION

The Covid 19 pandemic is sweeping the world (Pakpahan & Fitriani, 2020). This virus has spread to all corners of the world, including Indonesia. This virus is now the most feared virus in the world because it can have an impact on death (Harahap & Harahap 2020). We already know how dangerous this virus is for the health of the body. We should now live a healthy life in accordance with the health protocol that has been socialized by the Republic of Indonesia (Telaumbanua, 2020). Even though the COVID 19 pandemic is spreading, we must not remain silent and must continue to carry out sports activities and of course take measurements of the physical condition of the body. We know that sport is one of the physical and psychological activities of a person that is useful for maintaining and improving the quality of one's health (Aditia, 2015).

When we talk about sports, we will think about the heroes in sports who are none other than athletes. Athletes are athletes who strive to give maximum performance (Murdiansyah, 2016). In an effort to provide maximum performance, athletes cannot be separated from monitoring their physical condition. This is because the physical condition is the foundation for athletes in building maximum performance. Physical conditions need to be monitored and analyzed in order to provide an overview to the coach in providing an appropriate training program for the athlete's condition.

IKIP PGRI Bali, which has now changed its name to Universitas PGRI Mahadewa Indonesia, is a repository for outstanding athletes. This can be seen from the involvement of IKIP PGRI Bali in every sporting event, both National and International from various sports. The record was set by IKIP PGRI Bali by sending 70 athletes to the PORSENASMA event (Metro, 2014). This shows that students at IKIP PGRI Bali, especially the Physical Education Study Program, are dominant as athletes.

With the current pandemic situation, problems arise regarding the physical condition of the athletes at PGRI Mahadewa Indonesia University. Students who work as athletes do not know the extent of their current physical condition. Of course, this is a problem considering that sporting events such as PORPROV and PON Papua are waiting ahead. So the athlete is obliged to know the physical condition of the athlete's body (Prihanto, 2016). Relevant research includes: Safitri et al (2016) who examined the physical fitness profile of petanque athletes, besides that Santoso (2016) also investigated the

level of physical fitness of volleyball athletes, where of the relevant studies the aim was the same to map the level of physical fitness of athletes. athlete's physical fitness.

In this regard, athletes need to know the extent of their physical condition during this COVID 19 pandemic. So this research is entitled «Athletes' Physical Condition Analysis during the Covid 19 Pandemic». The formulation of the problem in this research is how is the level of physical condition of the athletes at PGRI Mahadewa Indonesia University during the Covid 19 pandemic? The purpose of this study was to determine the physical condition of athletes from the PGRI Mahadewa University Indonesia during the COVID 19 pandemic.

METHOD

This research is a quantitative descriptive study, which intends to explore and clarify a social phenomenon or fact, by describing several variables related to the problem under study, (Sugiyono, 2013). The research subjects were students of the University of PGRI Mahadewa Indonesia who worked as athletes. The object of the research is the athletes who are determined by the saturated sampling technique, namely taking the entire population who work as athletes. This research was carried out from May to June 2021 in the Multipurpose Hall, Universitas PGRI Mahadewa Indonesia.



Figure 1. Research Design

Information :

- P : Population
- Z : Sampling Technique
- S : Sample
- O1-O14 : Variable Measurement
- A : Analysis

The analytical technique used in this research is to use the frequency distribution technique (statistic deskriptif). The data processing method used descriptive statistical analysis to analyze the mean, SB, Maximum and Minimum variance. The data is processed using computerization with the SPSS version 16 system.

The biomotor components measured are: (1) Cardiovascular Endurance measured by Bleep Test, (2) Right Hand Muscle Strength is measured by Handgrip Dynamometer, (3) Left Hand Muscle Strength is measured by Handgrip Dynamometer, (4) Shoulder Muscle Tensile Strength

is measured by Expanding Dynamometer, (5) The Pushing Strength of the Shoulder Muscles is measured by Expanding Dynamometer, (6) Back Muscle Strength is measured by Back Dynamometer, (7) Limb Muscle Strength is measured by Leg Dynamometer, (8) Limb Muscle Explosion is measured by Jump-MD, (9) Arm Muscle Endurance is measured by Push-Up, (10) Body balance is measured by Blind Stork Balance Test, (11) Body Speed is measured by Running 30m, (12) Light Stimulus Reaction Speed is measured by Whole Body Reaction, (13) Sound Stimulus Reaction Speed is measured by Whole Body Reaction, (14) Body Agility is measured by Shuttle-Run, (15) Body flexibility is measured by Sit and Rich Flexibility, (16) Body fat content is measured by HBF-36 Body Fat Monitor (Adiatmika & Santika, 2016).

RESULTS AND DISCUSSION

Based on the descriptive test by taking the average of each physical component of the body that was carried out on the sample, the athlete's physical condition was obtained with the following details : (1) Physical Condition of Cardiovascular Endurance obtained an average of 34 ± 3.242 ml/kg/mt with a maximum ability of 45 ml/kg /mt and a minimum ability of 30 ml/kg/mt, (2) Right Hand Muscle Strength obtained an average of 46.7 ± 6.924 kg with a maximum ability of 56.9 kg and a minimum ability of 35.6 kg, (3) Left Hand Muscle Strength was obtained an average of 38.7 ± 4.310 kg with a maximum ability of 49.8 kg and a minimum of 31.5 kg, (4) Tensile Strength of the Shoulder Muscles obtained an average of 15.7 ± 3.207 kg with a maximum ability of 21.3 kg and a minimum ability of 8.5 kg.

For number (5) Pushing Shoulder Strength obtained an average of 26.0 ± 4.027 kg with a maximum ability of 35.4 kg and a minimum ability of 18.6 kg, (6) Back Muscle Strength obtained an average of 60.3 ± 7.821 kg with a maximum ability of 71 ,5 kg and a minimum ability of 39.6 kg, (7) Muscle Strength of the Legs obtained an average of 154.6 ± 14.666 kg with a maximum ability of 175.8 kg and a minimum ability of 120.6 kg, (8) Explosive Power of Limb Muscles obtained an average of 48 ± 8.032 cm with a maximum capacity of 65 cm and a minimum capacity of 30 cm.

As for the physical body component number (9) Arm Muscle Endurance obtained an average of 53 ± 4.148 x/minute with a maximum ability of 61 x/minute and a minimum ability of 45 x/minute, (10) Body Balance obtained an average of $38 \pm 12,447$ seconds with a maximum

ability 65 seconds and a minimum ability of 10 seconds, (11) Body Speed obtained an average of 4.80 ± 0.840 seconds with a maximum ability of 6.35 seconds and a minimum ability of 3.39 seconds, (12) Speed of Light Stimulus Reaction obtained an average of 1.394 ± 0.563 seconds with maximum ability 2.871 seconds and minimum ability 0.415 seconds, (13) Sound Stimulus Reaction Speed obtained an average of 1.193 ± 0.344 seconds with a maximum ability of 1.956 seconds and a minimum ability of 0.315 seconds, (14) Body Agility obtained an average of 15.02 ± 0.881 seconds with maximum ability 16.84 seconds and a minimum ability of 13.56 seconds, (15) Body flexibility obtained an average of 20.60 ± 4.442 cm with a maximum ability of 34.76 cm and a minimum ability of 14.15 cm, (16) Body fat content obtained r the average is $21 \pm 3.623\%$ with a maximum ability of 28% and a minimum ability of 15%.

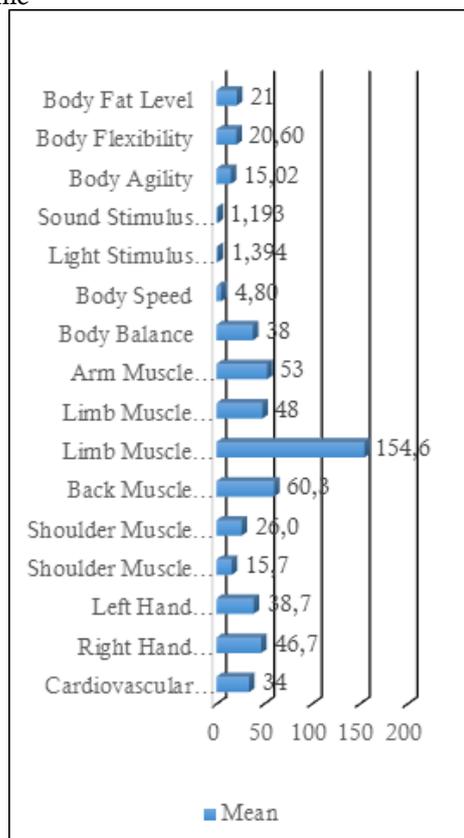
Based on the data obtained from the average results of each physical component of the athlete's body, then we accumulate it into the norm or level of the athlete's physical condition with the following results: (1) Cardiovascular Endurance is at the "Less" level, (2) Right Hand Muscle Strength is at "Good" level, (3) Left Hand Muscle Strength is at "Medium" level, (4) Shoulder Muscle Tensile Strength is at "Poor" level, (5) Shoulder Muscle Push Strength is "Medium", (6) Back Muscle Strength is at "Less" level, (7) Limb Muscle Strength is at "Medium" level, (8) Limb Muscle Explosive Power is at "Less" level, (9) Arm Muscle Strength is at "Medium" level , (10) Body Balance is at "Good" level, (11) Body Speed is at "Less" level, (12) Light Stimulus Reaction Speed is at "Less" level, (13) Sound Stimulus Reaction Speed is at " Less", (14) Body Agility is at "Less" level, (15) Body Flexibility is at the level of "Less" slightly at the "Low" level, and (16) Body Fat Level was at the "Slightly High" level.

Table 1. The Average Results and Levels of Physical Conditions of the Athletes of the University of PGRI Mahadewa Indonesia during the Covid 19 Pandemic

Physical Components	Mean	Level
Cardiovascular Endurance	34 ml/kg/mt	Not enough
Right Hand Muscle Strength	46,7 kg	Well
Left Hand Muscle Strength	38,7 kg	Currently
Shoulder Muscle Tensile Strength	15,7 kg	Less once

Shoulder Muscle Push Strength	26,0 kg	Currently
Back Muscle Strength	60,3 kg	Not enough
Limb Muscle Strength	154,6 kg	Currently
Limb Muscle Explosive Power	48 cm	Not enough
Arm Muscle Endurance	53 x/minut	Currently
Body Balance	38 second	Well
Body Speed	4,80 second	Not enough
Light Stimulus Reaction Speed	1,394 second	Not enough
Sound Stimulus Reaction Speed	1,193 second	Not enough
Body Agility	15,02 second	Not enough
Body Flexibility	20,60 cm	Less once
Body Fat Level	21%	Slightly High

Figure 2. Graph of Average and Level of Physical Condition of PGRI Mahadewa University Athletes in Indonesia during the Covid 19 Pandemic



Based on data from **Table 1** and **Figure 1**, of the 16 physical components of the athlete's body 2 physical components are at the "Good"

level, namely Right Hand Muscle Strength and Body Balance. While the 4 physical components are at the "Medium" level, namely Left Hand Muscle Strength, Shoulder Muscle Pushing Strength, Leg Muscle Strength, and Arm Muscle Strength. There are 7 physical components that are at the "Less" level, namely Cardiovascular Endurance, Back Muscle Strength, Limb Muscle Explosive Power, Body Speed, Light Stimulus Reaction Speed, Sound Stimulus Reaction Speed, and Body Agility. There are 2 physical components that are at the "Low" level, namely the Tensile Strength of the Shoulder Muscles and Body Flexibility. While the level of Body fat levels is at the "Slightly High" level.

This condition is certainly not ideal for an athlete who will fight on the sports stage to achieve maximum performance. This is because the athlete's physical condition does not allow them to perform optimally with the body's physical condition at a below standard level. To achieve achievement, athletes should be at the maximum level with the standard level of "very good". (Yuliana & Sugiharto, 2019). This is also reinforced by Rahman et al (2020) which says that in order to achieve good performance, we must maintain the condition of the body so that it remains at the highest level.

The physical condition of the athlete's body which is below the standard is caused by the interrupted training program due to the Covid 19 pandemic. With an irregular exercise pattern, the athlete's physical condition is disrupted due to a decrease in the intensity of the exercise provided (Tirtayasa et al, 2020). As a result of a decrease in the intensity of exercise, the muscles that were previously trained will return to their original condition due to a decrease in the intensity of the exercise (Nala, 2016). If the muscles that we used to train regularly and currently we reduce their training, the muscles are said to be experiencing degradation or the return of muscle conditions from being trained to normal or returning to the beginning when they have not received weight training. This is reinforced by Akhmad (2015) which says the muscles that are not retrained in condition will decrease and return to the way they were when our muscles had not exercised.

Another thing that is no less important is related to body fat levels. Body fat levels are very dangerous for the health of the body. Body fat content is something that must be prioritized in getting treatment priorities to support the athlete's physical condition. With the COVID 19 pandemic and the changing lifestyle of students due to this pandemic, athletes tend to reduce acti-

vities and dwell more on uncontrolled eating patterns. (Santika et al, 2020). With such activities, the physical condition of the athlete becomes disturbed and dangerous for the health and achievement of the athlete.

CONCLUSION

Based on the results and discussion above, it can be concluded that, the physical condition of the athletes at PGRI Mahadewa Indonesia University is at a non-ideal level with details: 2 physical components are at the "Good" level, 4 physical components are at the "Medium" level, 7 physical components are at the "Good" level, is at the "Less" level, 2 physical components are at the "Low" level, and Body fat levels are at the "Slightly High" level.

This data can be used by trainers as a reference or basis for preparing training programs to restore the athlete's condition to what it was before the COVID 19 pandemic, or even to increase it gradually and in accordance with training rules.

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