



## THE IMPACT OF THE COVID-19 PANDEMIC ON THE MENTAL AND PHYSICAL CONDITION OF SWIMMING AND ATHLETIC ATHLETES TO FACE PEPARNAS 2021

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### Abstract

The COVID-19 pandemic that is currently hitting Indonesia has an impact on various sectors, including the sports sector. This study aims to examine the impact of the COVID-19 pandemic on the mental and physical conditions of athletes in facing the 2021 National Paralympic Sports Week (PEPARNAS). In this study, a cross sectional survey design was used, with samples of 5 swimming athletes and 5 athletic athletes ranging from ages 18-22 years. The results showed that all data from the impact of Coronavirus Disease of 2019, mental and physical conditions were normally distributed with a significance value of  $0.200 > 0.05$ . The results of the study also showed that the COVID-19 pandemic had an impact of 89% on the mentality of swimming athletes and athletic athletes. Then the Coronavirus Disease of 2019 pandemic had an impact of 88% on the physical condition of swimming athletes and 92% on the physical condition of athletic athletes. Each variable also has a significance level of  $<0.05$  in the Spearman test, so that each variable has a correlation or is interconnected. Thus, in this study it was concluded that the Coronavirus Disease of 2019 pandemic had various impacts, especially in terms of mental and physical conditions on swimming athletes and athletic athletes who will face PEPARNAS 2021.

### Keyword:

*Pandemic, Mental Health, Physical Condition, Disability athlete's.*

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### Introduction

The current Coronavirus Disease of 2019 pandemic is a global crisis of an unprecedented scale in the modern era. By 2021, the SARS-CoV-2 virus has infected more than 6 million worldwide with more than 300,000 deaths (World Health Organization, 2020). The crisis/impact of the pandemic has also had a huge effect on the sports sector. As happened on March 24, 2020, on that day it was announced that the Tokyo 2020 Olympic and Paralympic Events were postponed to 2021 due to the Coronavirus Disease of 2019 virus pandemic. Of course, this has an impact on athletes and coaches, so they experience emotional reactions such as disappointment, frustration, and confusion (Taku & Arai, 2020). After all, they have made various preparations before the event.

In a pandemic situation like this, athletes, especially athletes with special needs, are no exception to be psychologically affected. In line with this, based on research it is stated that one of the broad effects of the onset of the Coronavirus Disease of 2019 pandemic situation has a negative impact, especially on the mental health of most athletes accompanied by an increase in reports of depression and anxiety symptoms (Davis, Gustafsson, Callow, & Woodman, 2020). Then it was also

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reinforced in a scientific approach, it was reported that Coronavirus Disease of 2019 as a disease that causes the onset of a pandemic situation that has significantly improved the mental health emergency that has previously never occurred worldwide (Mehrsafar et al., 2021).

During the pandemic, the implementation of self-isolation/ lockdown during the Coronavirus Disease of 2019 pandemic, is considered a strange and strange situation, where athletes must be in an isolation environment, they are required to stay away from their sports routines and various sports events without any certainty when it is possible to restart routines and events as well as from all forms of real social support that come from family and friends. This allows feelings of concern and frustration arise in some individual sports athletes such as in swimming. The different daily, weekly, monthly, and yearly routines that these athletes go through are also what affect their mental and physical state (Taku & Arai, 2020; Uroh & Adewunmi, 2021). Based on the situation described above, it causes a decrease in physical condition, where physical condition is the basic ability to develop other sports achievement abilities. Wardiman (2017), The purpose of physical condition coaching is to improve physical development in general and improve the typical physical development that perfects the techniques of the chosen or fostered sport. Thus physical training is required to improve the biomotor condition of the athlete.

Facts prove, during the pandemic Coronavirus Disease of 2019 certainly makes all human activities limited by large or small-scale social restrictions (Sya'diah & Jatmiko, 2020), not except for swimming and athletic athletes. Then, one of the supports for athlete performance is VO<sub>2</sub>Max or maximum oxygen consumption when doing high-intensity activities. The physical condition of athletes will be reduced if training activities are stopped, currently athletes do not get the same portion of training as those carried out during the sparring season, resulting in a decrease in vo<sub>2</sub>max conditions (Wibowo et al., 2021).

With the enactment of health procedures such as washing hands, wearing masks and maintaining distance in Indonesia, the training process must be carried out in isolation, thus athletes are not allowed to do activities other than outside the training ground or athlete's mes, the results of interviews and observation in the field, athletes feel saturated with training activities and feel stressed by the training situation because they have not been allowed to do activities outside the training ground for months, even visiting time for families is limited and must meet strict procedures to keep athletes from being exposed to Coronavirus Disease of 2019. With the condition of athletes who require special treatment, of course this is a challenge and a concern in order to maintain condition in training and physical fitness of the athlete himself. Based on the background of the problems that have been presented, researchers identified that the mental state of an athlete plays an important role in carrying out the training process, especially during the Coronavirus Disease of 2019 pandemic. The lack of confidence, fear, and suspicion that exists in athletes can cause athletes to hesitate to train even though they have carried out health protocols.



## Methods

This study uses quantitative methods. In quantitative research there is a survey research method, which includes information collected from a group of people to describe some aspect or characteristic (such as abilities, opinions, attitudes, beliefs, and knowledge) of the population of which that group is a part. To collect information is by asking questions, the answers to questions by members of this group are research data. Information is collected from the sample, not from every member of the population (Fraenkel, Wallen, & Hyun, 2012).

### *Participant*

Participants in this study were swimming and athletic athletes who were carrying out preparations for the National Paralympic Sports Week (PEPARNAS). Participants in this study were swimming athletes and athletic athletes who had an age range between 18-22 years.

### *Population & Sample*

The population to be used is swimming athletes and athletics athletes are carrying out the preparatory stage for PEPARNAS in Papua. Sampling in this study used the convenience sampling technique, the samples available based on this technique were 5 swimming athletes and 5 West Java contingent athletic athletes who will compete in the PEPARNAS event in 2021, in addition to that also because at the PEPARNAS XIX event in West Java which had previously won the overall champion and became the most province in medals.

### *Instrument*

The instrument for measuring the impact of the COVID-19 pandemic refers to the Impact of Event Scale-Revised (IES-R) instrument with a number of 22 items of statements in the questionnaire given to the sample to determine the impact of the COVID-19 pandemic, where this measuring instrument has been designed to assess a person's difficulties after experiencing serious life events such as public health crises and traumas experienced, in addition, this measuring instrument also questions the extent to which the person has been affected over the past 7 days (Şenişik, Denerel, Köyağasioğlu, & Tunç, 2021).

Meanwhile, to measure the mental condition of athletes using questionnaire instruments/ questionnaires which are the result of modifications of the mental health inventory (MHI) scale which refers to research conducted by (Aziz, 2015). The indicators in this period include aspects of anxiety, depression, loss of control, emotions, affective, life satisfaction. Then for the physical condition test used is a standardized instrument test, namely the VO2max test on swimming athletes and athletic athletes.

### *Procedure*

This research uses the quantitative method. The design of this study is to use a quantitative descriptive design through a cross-sectional survey approach. In addition, information is collected only at one time, although the time it takes to collect all the data can take several days (Fraenkel, Wallen, & Hyun, 2012). In this study, researchers want to examine the mentality of swimming athletes who will take part in the (PAPERNAS) during the COVID-19 pandemic.





### Data Analysis

In this study using the Statistical Product and Service Solution (SPSS) program version 22, with data analysis used was a data normality test, an anova regression test, and a spearman correlation test.

### Result

After the research data is obtained, then the data is processed in accordance with the provisions that the researcher has previously explained. First, the data is processed by the kolmogorov-smirnov data normality test. Second, the regression test is used to see the impact/ influence arising from the the impact of the Coronavirus Disease of 2019 pandemic on the mental and physical conditions of swimming athletes and athletic athletes, that the Spearman data test is used to see correlations or relationships between variables. The results of the normality test can be seen in the following table:

Table 1. Tests of Normality Kolmogorov-Smirnov

	Statistic	df	Sig.
<b>X</b>	.136	5	.200*
<b>Y1r</b>	.231	5	.200*
<b>Y1a</b>	.265	5	.200*
<b>Y2r</b>	.254	5	.200*
<b>Y2a</b>	.287	5	.200*

\*. This is a lower bound of the true significance.  
a. Lilliefors Significance Correction

Based on table 1, the data normality test in this study used the kolmogorov-smirnov data test. Where in the table X states data on the impact of the Coronavirus Disease of 2019 pandemic, Y1r states mental data on swimming athletes, Y1a states data on athletic athletes, Y2r states data on physical condition in swimming athletes, and Y2a states data on physical conditions in athletic athletes. All of these data have a significance value of  $0.20 > \alpha = 0.05$ , so that based on decision-making criteria/ guidelines, the data in this study are normally distributed. Then, an anova regression test is carried out to determine the amount of impact obtained, the results can be seen in the following table:

Table 2. Percentage of Data on the Impact of the COVID-19 Pandemic on the Mentality of Swimming Athletes

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.945a	.893	.857	.316

a. Predictors: (Constant), X

Based on table 2, it can be seen the magnitude of the impact of the COVID-19 pandemic on the mentality of swimming athletes in the R Square column, the amount of impact caused is 89%. Meanwhile, the percentage of the impact of the Coronavirus Disease of 2019 pandemic on the physical condition of swimming athletes can be seen in the following table:

Table 3. Percentage of Data on the Impact of the COVID-19 Pandemic on the Physical Condition of Swimming Athletes

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
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1	.938a	.880	.841	.606
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a. Predictors: (Constant), X

Based on table 3, it can be seen the magnitude of the impact of the COVID-19 pandemic on the physical condition of swimming athletes in the R Square column, the amount of impact caused is 88%. Judging from these results, it is believed that the Coronavirus Disease of 2019 pandemic that occurred has a considerable impact on aspects of physical condition, especially in athletes with disabilities in swimming sports who will compete in peparnas 2021 events. In addition to athletes with disabilities in swimming sports, researchers have conducted data processing on athletes with disabilities in athletic sports. Data test acquisition is presented in the following table:

Table 4. Percentage of Data on the Impact of the COVID-19 Pandemic on Athletic Athletes' Mentality

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.944a	.891	.855	.894

a. Predictors: (Constant), X

Based on table 4, it can be seen the magnitude of the impact of the Coronavirus Disease of 2019 pandemic on the mentality of athletic athletes in the R Square column, the amount of impact caused is 89%. While the percentage of the impact of the COVID-19 pandemic on the physical condition of athletic athletes can be seen in the following table:

Table 5. Percentage of Data on the Impact of the COVID-19 Pandemic on the Physical Condition of Athletic Athletes

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.962a	.926	.901	.516

a. Predictors: (Constant), X

Based on table 5, it can be seen the magnitude of the impact of the Coronavirus Disease of 2019 pandemic on the physical condition of athletic athletes in the R Square column, the amount of impact caused is 92%. Looking at these results, it is believed that the COVID-19 pandemic that occurred greatly had an impact on aspects of physical condition, especially on athletes with disabilities in athletics who will compete in the PEPARNAS 2021 event.

Furthermore, the analysis used is a spearman correlation test to see the correlation between variables, the results of the analysis can be seen in the following table:

Table 6. Correlations

		X	Y1r	Y1a	Y2r	Y2a	
Spearman's rho	X	Correlation Coefficient	1.000	-.949*	-.975**	-.949*	.975**
		Sig. (2-tailed)	.	.014	.005	.014	.005
		N	5	5	5	5	5
	Y1r	Correlation Coefficient	-.949*	1.000	.892*	.917*	-.973**



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	Sig. (2-tailed)	.014	.	.042	.029	.005
	N	5	5	5	5	5
Y1a	Correlation Coefficient	-.975**	.892*	1.000	.973**	-.921*
	Sig. (2-tailed)	.005	.042	.	.005	.026
	N	5	5	5	5	5
Y2r	Correlation Coefficient	-.949*	.917*	.973**	1.000	-.892*
	Sig. (2-tailed)	.014	.029	.005	.	.042
	N	5	5	5	5	5
Y2a	Correlation Coefficient	.975**	-.973**	-.921*	-.892*	1.000
	Sig. (2-tailed)	.005	.005	.026	.042	.
	N	5	5	5	5	5

\*. Correlation is significant at the 0.05 level (2-tailed).

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Based on table 6, the result is obtained that each variable has a correlation/relationship that can be proven by the significance value possessed between variables  $< \alpha 0.05$  where in the decision making criteria that if the significance value  $< \alpha 0.05$  there is a correlation between variable X, variable Y1 and variable Y2.

### Discussion

As we know how dangerous it is from the spread of the COVID-19 virus that has infected almost the entire world. As we all know that with the spread of this disease, it requires the government to take a policy for every member of the community to spend a lot of time only at home to stop the transmission of the virus. The various things that happen suddenly also certainly have a lot of impact, both physically and psychologically.

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In addition to the physical aspects that have decreased due to the COVID-19 pandemic, psychological aspects are also important to look at and handle. Because after all aspects of psychology are also very important in one's life, without psychological aspects one will not be able to live his life well, so for now the physical and mental aspects are a priority (Kim & Cruz, 2021). In the era of The Coronavirus Disease of 2019 pandemic, this situation has forced many people around the world to stay at home and self-isolate for quite a long time. This causes several psychological effects such as depression, post-traumatic stress symptoms, panic, confusion, anger, fear, and substance abuse that will reduce their individual functional abilities (Teferi, 2020).

In this study, researchers specialized in research only on athletes with disabilities in swimming and athletic sports only. Where the results of the study showed that the average impact of the Coronavirus Disease of 2019 pandemic did not differ much between swimming and athletic sports. In athletes in swimming



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sports has an average score of 73,80 while in athletic athletes have an average score of 73. With the percentage of both sports is at 89%. This proves that both sports are indeed affected quite high from the occurrence of the COVID-19 pandemic, especially on the mental aspect considering the large percentage obtained.

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Some of the policies taken by the government also have an impact on the physical aspects of athletes, this is because of the chaotic schedule of their training so that they have to re-adapt to training conditions during the COVID-19 pandemic so that their physical condition is maintained. Because after all, the physical condition of an athlete is the main foundation for sports performance. In addition, international and national sports activities have been canceled or postponed to minimize the risk of spreading the virus, it is also a challenge for those who have previously prepared as much as possible for these activities (Parm, Aluoja, Tomingas, & Tamm, 2021).

In conjunction with the mental aspect, the physical condition aspect of swimming athletes and athletic athletes is also measured in order to find out how much impact the Coronavirus Disease of 2019 pandemic has had on their physical condition. The results of the data test showed that the average value of the impact of the COVID-19 pandemic on the physical condition of swimming athletes was 52,40 while in athletics athletes it was 51,80. So the average difference of each cabor is only around 0.6. Where the difference in the average yield of these values is also quite large. So it shows that both athletics sports have a greater impact of the COVID-19 pandemic compared to athletes in swimming. This can also be seen from the percentage of the impact of the Coronavirus Disease of 2019 pandemic on swimming athletes by 88% which is less than the impact on athletics athletes which has a percentage of 92%. However, both sports have had an impact from the occurrence of Coronavirus Disease of 2019 on their physical condition.

In line with research that has been carried out in Poland, where the condition of athletes with disabilities is affected due to the large number of sports facilities that are closed, then the facilities for outdoor training are very limited. Polish Paralympic athletes are often hindered from regular training, so their preparation process for the Paralympics in Tokyo was disrupted for 1 month due to the imposition of lockdowns during the pandemic (Urbański, Szeliga, & Tasiemski, 2021). Based on this research, it is enough to describe the condition of disabled athletes who will compete in the upcoming PEPARNAS 2021 event. So it requires a readjustment regarding the training program and schedule in order to optimally perform their sports when competing in the future.

### Conclusion

First, based on the results of research conducted before the PEPARNAS 2021 event, it has been obtained that the Coronavirus Disease of 2019 pandemic has a mental impact on athletes with disabilities in swimming and athletic sports as evidenced by the results of a considerable percentage of impact/ influence. Second, due to the Coronavirus Disease of 2019 pandemic, it caused the training routines of athletes who will face PEPARNAS 2021 to change, where the data results showed that there was an impact/ influence of the Coronavirus Disease of 2019 pandemic on athletes with disabilities in swimming sports and athletes with disabilities in athletics. It is



also booked with the result of a large percentage of the impact. Third, in this study there are variables of the impact of the Coronavirus Disease of 2019 pandemic, mental variables and physical condition variables. Then, this has been strengthened through data tests, where the data that has been obtained in this study shows that between variables in this study have a correlation. So, the impact of the pandemic that occurred is indeed very influential on mental conditions and physical conditions in athletes with disabilities in swimming and athletics who will participate in the PEPARNAS 2021 event.

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