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## The Level Of Physical Fitness Of UPMI Medan PJKR Students After The Covid-19 Pandemic

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### Abstract

This research is a descriptive research type with a research objective to determine the level of physical fitness of PJKR UPMI Medan students for the 2021/2022 Academic Year. This research is qualitative research using test observation sheets and measurements in collecting data and using 25 PJKR UPMI Medan students. This study obtained the results of the physical fitness level test for PJKR UPMI Medan semester one students. The scores had a good score category with 14 students (56%) of the total 25 respondents. Thus, the results of the physical fitness level test for PJKR UPMI Medan Semester 1 student after the Covid-19 Pandemic can be categorized as Good.

**Keywords** – Level Of Physical Fitness; Pjkr Students; Upmi Medan; Post-Covid-19 Pandemic



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## 1. Introduction

The state of learning during the Covid 19 pandemic made the Education World extra to evaluate learning. Learning activities not carried out face-to-face make educational institutions reorganize the education curriculum during the current pandemic (Franklin & Quindry, 2022). This curriculum change also occurs in learning at the college level that runs online learning in total, although previously, some of the learning was done online as well. This total change in learning to be online is done because it is to maintain Health during a pandemic and follow the health protocol rules set by the government (Chou et al., 2022).

This situation makes the obstacles faced by teachers and lecturers lighter. These constraints can include changes in curriculum, approaches, learning methods, learning media and the use of online media as a reference for online learning (Mirzaei et al., 2020). This makes lecturers must be accustomed to learning using information technology that develops in the field of Education (Zhang et al., 2021). However, in learning, one must do activities to support Health so that one is more excited and not quickly tired or sleepy, which makes one easily tired.

Physical fitness a person plays an active role in learning; without physical fitness, a person's activities will be disrupted, especially learning activities that require concentration (Aliriad et al., 2023). Physical fitness is necessary to help the body effectively carry out daily tasks without causing acute fatigue (Franklin et al., 2022). Physical fitness itself means physical fitness with the type of work done in everyday life, or, in other words, that are matched is a physical component with tasks in meeting the demands of daily life (Muñoz-Vera et al., 2017).

To determine a person's physical fitness level can be improved by taking into account the factors necessary for the activity, such as endurance, strength, speed, and flexibility (Kokstejn & Musalek, 2019) (Gunawan et al., 2020; Hong et al., 2022). Therefore, it is required to do physical activity to improve and develop physical freshness. Physical freshness, or physiological fitness, is a person's ability

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to perform daily tasks and work diligently and vigilantly without experiencing significant fatigue and still have energy reserves to fill free time and face unexpected emergencies (Franklin et al., 2022).

Physical fitness is a state that a person has or achieves about the ability to perform physical activities. There are several ways to measure physical fitness to test work (Exercise Test), for example, the Harvard Step-up Test (HST) with the method of up and down the bench at a predetermined speed (den Hollander et al., 2023; Franklin & Quindry, 2022; Holfelder & Schott, 2014; Hosker et al., 2019). Harvard Step-up Test uses heart rate as a unit to determine the level of cardiovascular fitness. Previous research has shown that there is a significant relationship between cardiovascular fitness and body mass index (BMI) both by the HST method and Shuttle Run Test; it was found that the higher the BMI, the lower the level of cardiovascular fitness. (Maulina & Husna, 2017).

A good level of physical fitness will enable a regiment student to work effectively and efficiently, not be susceptible to disease, and learn and work more passionately and excitedly. It can be optimal and face challenges in life within the University and the community. Models or kinds of exercises to improve fitness There are various; one physical exercise program that is easy and does not require a long time is the main goal to improve the physical fitness of students Regiment. Measuring the level of physical fitness of Regimental students is a form of effort to improve their physical fitness. Regimental students and measurement of physical fitness level consists of several kinds of physical test items carried out continuously without any pause or rest period (Pihlainen et al., 2020). This test and measurement are efficient because it is straightforward to do by students of the regiment in Gorontalo province, especially students of the University Regiment in Gorontalo. Measuring the level of physical fitness of Regimental students is expected to improve the physical fitness of Regimental students so that with good fitness, students can carry out activities at the University well. Students become not quickly tired because they have good endurance, obtain a

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conducive atmosphere of training and work and can improve physical fitness (Fadillah et al., 2021).

This makes us aware that the importance of physical fitness in the maintenance of Health is no doubt; if the Health the higher, the physical freshness of a person will get better (Christino et al., 2022; Henderson et al., 2019; Tondelli et al., 2023). For CHD students, physical fitness is an absolute requirement because CHD students in lectures are more in the field and use physical activity than theory in the classroom. Therefore, physical fitness becomes an absolute must-have Factor. So various efforts are made to maintain or improve physical fitness. However, when referring to the results of observations, it is known that there are many physical fitness constraints on UPMI CHD students, such as running speed, agility in lifting the body, lying sitting, jumping upright, and running distance decreased. This situation makes it essential to conduct tests to measure the physical freshness of students who must be fit to carry out their training activities.

This study also drew inspiration from research conducted by (Galán-Mercant et al., 2019) that activity in sports can be related to health and achievement goals consisting of several factors, one of which is physical fitness. Related to physical fitness in sports department students, especially during the new expected covid-19 pandemic, the physical fitness level of sports education students was 14 people (17.95%) with a good classification, then with a medium classification of 43 people (55.13%), and with a less classification of 21 people (26.92%). Thus, the results of the physical fitness level test of sports students during the new expected covid-19 pandemic can be categorized as moderate. This result shows the importance of physical fitness tests, especially for students related to sports.

Another study conducted (Jang et al., 2021) found that conducting a physical fitness level test on students majoring in sports is mandatory and must be done. His research showed that improving the physical condition of athletes if they want to master a match to become a champion in a taekwondo tournament

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or championship. This is also related to this study, which is considered essential to measure the physical fitness of UPMI PJKR students during the pandemic so that they continue to do sports even though they are online learning.

Based on the condition of the results of observations and previous research on the importance of physical freshness test students, especially urban CHD, then this study will describe the results of physical freshness test students CHD Upmi Medan through tests of running speed, dexterity in lifting the body, lying sitting, jumping upright, and running distance.

## 2. Method

This study is a quantitative descriptive research. This study will use the type of survey research or observation (Massazza et al., 2022). The Target of this study was male students of UPMI Pjkr semester 1, which amounted to 25 people. Data was collected using test observation sheets consisting of running speed, agility in lifting the body, lying, sitting, jumping upright, and running distance. The location of this data collection will be in the UPMI Medan field. Here is a grid of test sheets measuring the fitness level of CHD students:

**Table 1** Physical Fitness Level Test Sheet Grid

No	Test Indicator
1	Running Speed
2.	Hanging body lift 60 Minutes.
3.	Jump Upright
4.	Run 1200 m
5.	<i>Sit Up</i>

Researcher 2022

Data analysis techniques in this study will use the calculation of the percentage of success in each indicator by using the formula:

$$P \frac{\text{number of students}}{\text{Total Number Of Students}}$$

This result will then be carried out with several stages based on tests according to the desired indicators. Here are some stages in conducting tests in this study:

1. For running and hanging elbow bend test items, use units of time measurement (minutes and seconds).
2. For the test of sitting, lying down, and hanging test lift the body using a unit of measure the number of repetitions of Motion (how many times).

For the excellent skip test, use a unit of measurement of height (centimetre).

### 3. Result and Discussion

The results of this study are a field study on the physical fitness of students in semester 1 of the UPMI Medan CHJKR academic year 2021/2022 after the Covid-19 pandemic. Sixty meters sprint test, 60 seconds body lift hanging test, 60 seconds sitting lying test, upright jumping test, 1200 meters sprint test. Descriptive statistical calculations are intended to determine the accurate picture of the condition of all respondents related to aspects of the variables studied. The description of each variable will be explained in the following description.

**Table 2.** Frequency Distribution Of 60 Meter Running Test Results In Students

Value	Test Results	Frequency	Per cent (%)
5	Sd – 7,2 seconds	5	20,00
4	7,3 – 8,3 seconds	15	60,00
3	8,4 – 9,6 seconds	5	20,00
2	9,7 – 11,0 seconds	0	0,00
1	11,1 – seconds	0	0,00
	Total	25	100,00

Source: Olah data2022

The distribution of the results of the 60-meter running test carried out on the 1st-semester students of the Upmi Medan PJKR academic year 2021/2022 after the Covid – 19 pandemic is the Sd – 7.2-second category of 5 people (20%),

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the 7.3 – 8.3 second category of 15 people (60.00%), the 8.4-9.6 second category of 5 people (20.00%).

The results of this test are research that even during a pandemic, the level of awareness of CHD students is very high to perform and maintain body fitness. This is to (Choi et al., 2021) that the results of the physical fitness test research are as much as 0% (0 learners) in the perfect classification, 15% (7 learners) in the excellent classification, 29% (14 learners) in the medium classification, 46% (22 learners) in the less classification, and 10% (5 peseta learners) in the less classification. So the average physical fitness of SMA Negeri 2 Tasikmalaya city students is in good classification.

The results of the analysis of the 60-second body lift hanging test for students of the 1st semester of the UPMI Medan CHJKR academic year 2021/2022 after the Covid-19 pandemic. Hanging ability elbow bend is used as the beginning of arm strength and is a diagnostic test of movement coordination. At the age of 19-21, developing adequate elbow bend hanging ability has excellent benefits in addition to forming arm muscles and accelerating height growth.

The 60-minute body lift hanging test measures the resilience and strength of the shoulder and arm muscles. The tools used to carry out a flat and clean floor are a single bar adjusted to the test participants' height, a handle pipe made of iron with a pipe size of  $\frac{3}{4}$  inches, chalk, a stopwatch and stationery.

Based on the results of the body lift hanging test on the 1st-semester students of the Upmi Medan PJKR academic year 2021/2022 after the Covid-19 pandemic with a total of 25 respondents, it was obtained that the highest body lift hanging score was 25.05 seconds and the lowest was 11.61 seconds. The distribution of body lift data can be seen in Table 3.

**Table 3.** Frequency distribution test results hanging body lift 60 seconds

Value	Test Results	Frequency	Per cent (%)
5	Sd – 7,2 seconds	5	20,00
4	7,3 – 8,3 seconds	14	56,00
3	8,4 – 9,6 seconds	6	24,00
2	9,7 – 11,0 seconds	0	0,00
1	11,1 – seconds	0	0,00
	Total	25	25

Source: Olah data2022

The distribution of test results is the 7.2 seconds category for as many as five people (20 %), the 7.3-8.3 seconds category for as many as 14 people (56 %), and the 8.4-9.6 category for as many as six people (24 %). According to (Darmawan, 2017), the ability of technical elbow hanging on penjaskesrek students to achieve good results by proven elbow bending hanging test, with an average score of 4, means that students' physical fitness level is at an average level.

The results of this study by the research of Yulianti et al. (2018) state that the physical freshness test on PJKR students for the 2017/2018 academic year showed a score of 15.5, then a percentage of 78.57 %, then the norm classification obtained the medium category. Thus, the level of physical freshness of Penjaskesrek students in the 2017/2018 academic year is in the medium category.

The results of the SIT-UP Test (Sit-Up) analysis for 60 seconds for students of the 1st semester of the UPMI Medan CHJKR academic year 2021/2022 after the Covid-19 pandemic. The sit-up baring test aims to measure the strength and ability of the abdominal muscles. In this study, the tools used to carry out the baring sitting test are a field with flat and clean conditions, stationery, stopwatch.

Physical fitness exercise by doing sit-ups for 60 Minutes gives a positive value to students; in addition, the benefits are to form abdominal and neck muscles and become one of the predictors to improve physical fitness.

Based on the results of the lying-down test for sports education students in the 2019/2020 academic year of Universitas Quality Berastagi with a total of



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25 respondents, a lying-down test score was obtained, namely with the highest score obtained 35 times and the lowest 16 times. She further elaborated on the results of the analysis based on each category of test results in the category of 28-35, as many as 12 people or 48%, category 24-27, as many as four people or 16 %, category 20-23 as many as five people or 20%, category 16-19 as many as four people or 16 %. The distribution of data on the results of the sit-up test for 60 can be seen in Table 3.

**Table 4.** Frequency distribution of sit-up test Data for 60 seconds

Value	Test Results	Frequency	Per cent (%)
5	28–35	12	48,00
4	24–27	4	16,00
3	20–23	5	20,00
2	16–19	4	16,00
1	12–15	0	0.00
	Total	25	25

The results of The Vertical Jump test analysis of students in semester 1 of the UPMI Medan CHJKR academic year 2021/2022 after the Covid-19 pandemic. The Vertical Jump test measures the ability of explosive or explosive power. In this study, the tools used to perform the test consisted of chalk, stationery, a board with a scale of 30x150 cm, and an eraser.

Vertical jumping is a physical activity performed by lifting both legs as high as possible in a fixed position in place or moving around. The purpose of the excellent jumping test is to measure the ability of the leg muscles for the procedure in the implementation of vertical jumping, which begins with standing upright near the wall. The position rests on both feet with the position of one of the arms on the wall and then straightened up, then jumping with the ability as high as possible to reach the scale board using the hands and landing with both feet. According to (Juniarsyah, Apriantono and Adnyana, 2017) classifies, the components of physical fitness consist of speed, endurance, explosive power, balance, and strength.

In the excellent jump test, the tool used is a board with a scale of 30 cm wide and 150 cm long, with a distance between the scales of 1 cm on each board.

Then the scale board that has been made is attached to the wall with a scale of 0 and 150 cm floor. After the procedure, activities will be obtained, and values and the difference between the highest achievement in the first measurement do not jump, resulting from a vertical jump.

Based on the results of the excellent jumping test on Medan's 1st semester PJKR students in the 2021/2022 academic year after the Covid-19 pandemic with 25 respondents, the analysis results with the highest value of the jumping test were 47 cm, and the lowest value score was 41 cm. The distribution of test results is Category 47-48, as many as six people or 24 %, category 45-46, as many as eight people or 32 %; Category 43-44, as many as eight people or 32% and Category 41-42 as many as three people or 12 %. For more information, the analysis results can be seen in Table 4.

**Table 5.** The Results Of The Analysis Of The Jump Upright Test Data

Value	Test Results	Frequency	Per cent (%)
5	47-48	6	24,00
4	45-46	8	32,00
3	43-44	8	33,33
2	41-42	3	12,00
1	39-40	0	0.00
	Total	25	25

The 1200-meter running test aims to take measurements of the endurance of the heart and lungs, respiratory rate and blood circulation in the body. In this study, the tools used are a stopwatch, track for running, pole, whistle, flag and stationery.

The results of the analysis on the test run 1200 meters with the number of respondents as many as 15 people. Thus, the highest score of students in semester 1 of the Upmi Medan PJKR academic year 2021/2022 after the Covid-19 Pandemic on the 1200-meter running test was 7.58 minutes, and the lowest value was 11.27 minutes. The results of the 1200 meter running test were categorized as 3'14", as many as five people or 33.33%, Category 3'15 – 4'25", as many as six people or 40%; Category 4'26" – 5'12", as many as three people or

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20% and Category 5'13 – 6'33 " as many as one people or 6.67. For more details, see Table 6.

**Table 6.** 1200 Meter Running Test Results

Value	Test Results	Frequency	Per cent (%)
5	3'14"	8	32,00
4	3'15 – 4'25"	8	32,00
3	4'26" – 5'12"	6	24,00
2	5'13 – 6'33"	3	12,00
1	below 6'33"	0	0.00
	Total	25	25

Data on the physical freshness test results for students in semester 1 of the UPMI Medan CHJKR academic year 2021/2022 after the Covid-19 pandemic. The results obtained from conducting physical fitness tests on students in semester 1 of the UPMI Medan PJKR academic year 2021/2022 after the Covid-19 pandemic the classification of grades are excellent, namely as many as one person (4%), both as many as 14 people (56%), medium classification as many as seven people (28%), less classification as many as three people (12 %) and not found in less classification at all. So the level of physical fitness is included in the moderate category. For more details, you can see Table 6, and the graph of the physical fitness test results for students in semester 1 of the UPMI Medan CHJKR academic year 2021/2022 after the Covid-19 pandemic can be seen in Figure 7.

**Table 7.** Classification of physical freshness test results for students in semester 1 of UPMI PJKR Medan academic year 2021/2022 after the Covid-19 pandemic.

Value	Test Results	Frequency	Per cent (%)
5	22 – 25	1	4,00
4	18 – 21	14	56.00
3	14 – 17	7	28,00
2	13 – 10	3	12,00
1	5 – 9	0	0,00
	Total	25	25

In physical fitness research, this study is in the age group of 16-19 years, with several tests conducted. The tests carried out by the researchers to obtain

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data on the level of physical fitness of students in semester 1 of the UPMI Medan CHJKR academic year 2021/2022 after the Covid-19 pandemic, scores on the 60-meter running test obtained results with good categories on the 30-second body lift hanging test obtained results with medium categories, the 60-second sitting lying test obtained excellent results, the good jumping test obtained reasonable and medium conclusions, the 1200-meter running test concluded good results. So that the physical fitness test at the University of quality sports education students Berastagi as a whole can be categorized with good results. As for the classification still lacking, improvements must be made to improve physical fitness.

The implementation of field Lecture activities has had a good impact on the physical fitness of PJKR students in Semester 1 of the 2021/2022 academic year of the Indonesian Community Development University Medan. Lectures given online and offline during the Covid-19 pandemic make students rarely engage in sports activities that can cause a decrease in physical fitness. After the covid-19 pandemic made, new changes to the order of government regulations so that campuses could conduct face-to-face lectures using health protocols. This causes that during lectures during covid-19, students turn out to do a lot of sports activities at home to increase their endurance from the disease that comes.

Based on Table 7, it can be seen from the results of the research that has been carried out; it is concluded that through the Indonesian physical fitness test (TKJI) on upmi Medan semester 1 CHJKR students for the 2021/2022 academic year after the Covid-19 pandemic, the level of physical fitness in students is good. The results of physical fitness are the results of research by Panggraita et al. (2020) on the physical freshness test for Penjaskesrek students for the 2017/2018 academic year showed a score of 15.5. A percentage of 78.57 %, the norm classification obtained the medium category. Thus, the level of physical freshness of Penjaskesrek students in the 2017/2018 academic year is in the medium category.

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Some of the results of this study are that all Poker semester one student carry out sports activities to support their physical Health and fitness during the pandemic. So they still have good fitness values when doing fitness tests after the pandemic.

#### 4. Conclusion

Based on the results of research and data analysis conducted by the researchers, the researchers concluded that the fitness level of students in semester 1 of the Upmi Medan CHJKR academic year 2021/2022 after the Covid-19 pandemic was included in the excellent score category with a total of 14 students (56 %) out of a total of 25 respondents.

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