INTERNATIONAL COLLABARATION RESEARCE REPORT

RESEARCE REPORT

PROFILE OF PHYSICAL FITNESS, BODY INDEX AND ACADEMIC ACHIEVEMENT OF PHYSICAL EDUCATION TEACHER CANDIDATES UNIVERSITAS SRIWIJAYA, INDONESIA AND PENGASINAN STATE UNIVERSITY PHILIPINA

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DEPARTMENT OF PHYSICAL EDUCATION, SPORT AND HEALTH
FAKULTY OF TEACHER TRAINING AND EDUCATION
SRIWIJAYA UNIVERSITY
INDONESIA

2022

ENDORSEMENT PAGE RESEARCH REPORT
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FACULTY OF TEACHER TRAINING AND EDUCATION
SRIWIJAYA UNIVERSITY 2022

Title Research : Profile Of Physical Fitness, Body Index And Academic Achievement Of Physical Education Teacher Candidates Universitas Sriwijaya, Indonesia And Pengasinan State University Philipina

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KEPUTUSAN
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UNIVERSITAS SRIWIJAYA
NOMOR : 1674/UN9.FKIP/TU.SK/2022

TENTANG

PENETAPAN PEMENANG PROPOSAL
PENELITIAN KOLABORASI INTERNASIONAL
FAKULTAS KEGURUAN DAN ILMU PENDIDIKAN
TAHUN 2022

DEKAN FAKULTAS KEGURUAN DAN ILMU PENDIDIKAN

Menimbang :
a. bahwa sehubungan dengan diadakan penerimaan dan seleksi Proposal Hibah Penelitian Dosen bagi seluruh Dosen Fakultas Keguruan dan Ilmu Pendidikan Tahun 2022, Fakultas perlu penetapan Pemenang Proposal Kolaborasi Internasional Dana DIPA Fakultas Keguruan dan Ilmu Pendidikan Tahun 2022;
b. bahwa sehubungan dengan butir a di atas, maka dipandang perlu diterbitkan Surat Keputusan sebagai pedoman dan landasan hukumnya.

Mengingat :
1. Undang-undang No.20 Tahun 2003;
2. Peraturan Pemeritahan Nomor 4 Tahun 2014;
3. Permen Ristekdikti Nomor 12 Tahun 2015;
4. Permen Ristekdikti No. 17 Tahun 2018;
5. Kepmenkeu RI Nomor 190/KMK.05/2009;
6. Kepmenristekdikti RI Nomor 32031/M/KP/XI/2019;
7. Keputusan Rektor Unsri Nomor 0110/UN9/SK.BUK.KP/2022;

MEMUTUSKAN

Menetapkan : KEPUTUSAN DEKAN FAKULTAS KEGURUAN DAN ILMU PENDIDIKAN UNIVERSITAS SRIWIJAYA TENTANG PENETAPAN PEMENANG PROPOSAL KOLABORASI INTERNASIONAL DANA DIPA FAKULTAS KEGURUAN DAN ILMU PENDIDIKAN TAHUN 2022.

KESATU : Menunjuk Saudara-saudara yang namanya tertera dalam lampiran Surat Keputusan ini sebagai pemenang Proposal Kolaborasi Internasional Dana DIPA Fakultas Keguruan dan Ilmu Pendidikan Tahun 2022.

KEDUA : Segala biaya yang timbul sebagai akibat dari diterbitkannya Surat Keputusan ini dibebankan pada Anggaran penyelenggaraan penyeleksian Proposal Kolaborasi Internasional Dana DIPA Fakultas Keguruan dan Ilmu Pendidikan Tahun 2022.

KETIGA : Keputusan ini berlaku sejak tanggal ditetapkan sampai dengan selesainya kegiatan dengan ketentuan bahwa segala sesuatu akan diubah dan/atau diperbaiki sebagaimana mestinya apabila dikemudian hari ternyata terdapat kekeliruan dalam Keputusan ini.

Ditetapkan di : Inderalaya
Pada Tanggal : 27 Juni 2022

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Tembusan Yth:
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2. Ybs. untuk dilaksanakan

Lampiran I : Surat Dekan Fakultas Keguruan dan Ilmu Pendidikan Universitas Sriwijaya
Nomor : 1674/UN9.FKIP/TU.SK/2022
Tanggal : 27 Juni 2022

No.	Nama Pengusul	Judul	Anggota	Mahasiswa	Jumlah Dana (Rp.)
1.	Dr. Hartono, M.A.	Cross-Cultural Study: Comparisan of Pre-Service Teachers' Beliefs Regarding Community Engagement and Orientation Toward Climate Change in Indonesia, United States, and Turkey	1. Prof. Sofendi, M.A. Ph.D. 2. Dr. Rita Inderawati, M.Pd. 3. Prof. Dr. Ratu Ilma Indra Putri, M.Si. 4. Prof. Dr. Ida Sriyanti, M.Si. 5. Dr. Riswan Jaenudin, M.Pd.	1. Mia Handayani, S.Pd. 2. Mita Septiana, S.Pd.Gr. 3. Tamara Becce Tenridinanti, S.Pd,	200.000.000
2.	Dra. Nyimas Aisyah, M.Pd., Ph.D.	Development of Teaching Materials Climate change to Facilitate Changes in Attitude of Pre-Service Teachers	1. Dr. Ismet, S.Pd., M.Si. 2. Sary Silvhiany, M.Pd., M.A., Ph.D. 3. Dra. Cecil Hiltrimartin, M.Si., Ph.D. 4. Dr. Meilinda, M.Pd.	1. Meily Putri Agustini 2. Chairunnisa 3. Ayu Deshiana	200.000.000
3.	Prof. Dr. Zulkardi, M.Ikom., M.Sc	Development of Stem-Based Mathematics and Science Teaching Materials to Improve 21st Century Skills of High School Students in Palembang	1. Prof. Tatang Suhery, M.A., Ph.D. 2. Dr. Effendi, M.Si. 3. Dr. Ketang Wiyono, S.Pd., M.Pd. 4. Drs. Kodri Madang, M.Si., Ph.D.	1. Elika Kurniadi 2. Weni Dwi Pratiwi 3. Nauratun Nazhifah	150.000.000
4.	Prof. Dr. Nurhayati, M.Pd.	The Transformation of The Perang Menteng and The Awang Semaun Verses: An Effort to Maintain and Develop Malay Literature Based on Response Theory	1. Dr. Didi Suhendi, M.Hum. 2. Dr. Soni Mirizon, M.A. 3. Dr. Machdalena Vianty, M.Ed., M.Pd.	1. Arba Ina Putri 2. Ayu Agustina	150.000.000
5.	Dr. Azizah Husin, M.Pd.	Comparative Analysis of Green Policies, Educational Tourism Development Opportunities in Indonesia, and The Philippine	1. Prof. Dr. Sri Sumarni, M.Pd. 2. Dr. Makmum Raharjo, M.Sn. 3. Dr. Siti Dewi Maharani, M.Pd. 4. Dr. Yosef, M.A.	1. Heni Octavia 2. Lucky Marantika	150.000.000

No.	Nama Pengusul	Judul	Anggota	Mahasiswa	Jumlah Dana (Rp.)
6.	Dr. Riswan Jaenudin, M.Pd.	Futures Thinking Culture in Southeast Asian Education Institutions Towards the Attainment of Sustainable Development Goals	1. Dra. Umi Chotimah, M.Pd., Ph.D. 2. Dr. Farida, M.Si. 3. Dr. Dedi Irwanto, S.S., M.A.	1. Dewi Manggar Sari 2. Bela Sonia 3. Fatra Yudha Grafika	150.000.000
7.	Dr. Iyakrus, M.Kes.	Profile of Physical Fitness, Body Index and Academic Achievement of Physical Education Teacher Candidates Universitas Sriwijaya, Indonesia and Pengasinan State University Philipina	1. Dr. Hartati, M.Kes. 2. Dr. Meirizal Usra, M.Kes. 3. Dr. Wahyu Indra Bayu, M.Pd.	1. Dinda Dwi Cahyuni, S.Pd. 2. Heri Nugroho, S.Pd. 3. Romi Yudhistira 4. Eries Alpheba Hadinata	150.000.000

DEKAN,

HARTONO
NIP 196710171993011001

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DEPARTMENT OF PHYSICAL EDUCATION, SPORT AND HEALTH
FAKULTY OF TEACHER TRAINING AND EDUCATION
SRIWIJAYA UNIVERSITY
INDONESIA

2022

Identity and General Information

1. Research Title: Profile Of Physical Fitness, Body Index And Academic Achievement Of Physical Education Teacher Candidates Universitas Sriwijaya, Indonesia And Pengasinan State University Philipines**.**
2. Researchers

No	Name	Position	Expertise	Institution	Allocated Time (hour/week)
1	Dr.Iyakrus, M.Kes.	Principal	Physical Education	FKIP UNsri	16 hours
2	Dr.Hartati , M.Kes.	Member 1	Physical Education	FKIP UNsri	16 hours
3	Dr.Meirizal Usra, M.Kes.	Member 2	Physical Education	FKIP Unsri	16 hours
4	Dr.Wahyu Indra Bayu, M.Pd.	Member 3	Physical Education	FKIP Unsri	16 hours

3. Strategic Issues : Physical Fitness Level, Body Mass Index. .
4. Research Topics : Level of physical fitness, body mass index and student academic achievement.
5. Research object : Students of Physical Education Study Program FKIP Unsri and Students of Pangasian State University Philippines.
6. Research time : March 2022 - November 2022
7. Research Location : Campus of Physical and Health Education Study Program FKIP Unsri Indralaya and Pangasingan state University campus .
8. Targeted results : Knowing the level of physical fitness, Body Mass Index and Academic Achievement of Physical Education Study Program Students, FKIP, Sriwijaya University and State University Exile Campus in the framework of the inclusion of learning models in the future .
9. Other institutions are involved : Pangasingan State University
10. Other sources of costs : Nothing
11. Other information deemed necessary : Nothing

Summary

Physical and health education is an important part of holistic education which aims to improve several aspects of student life through systematically planned physical activities to achieve educational goals. The benefits of physical fitness are achieved through physical activity. Physical fitness is an important indicator of the health status of prospective Physical Education teacher students and of course a predictor of good health status in life. Physical education teacher candidates must be physically and mentally healthy so that they can become role models for their students later. When students see their teacher in good shape and practicing a healthy lifestyle, they are more likely to want to get fit or practice the healthy behavior themselves.

Physical fitness can contribute to student academic achievement. The relationship between physical fitness and academic achievement can reflect student achievement orientation towards motivation. Motivated students can strive for achievement in academics. Physical fitness is consistently associated with higher self-esteem, lower levels of anxiety and stress. Student physical fitness can reflect overall health such as better nutrition, physical activity, and weight status.

During current online learning, prospective sports teacher students have excess body fat and poor aerobic fitness compared to during lecture activities before the Covid-19 pandemic. Being overweight or obese is a bad physical fitness, especially for students who are prospective sports teachers. Physical fitness is considered a strong marker of health and quality of life. Health and academic achievement of students are highly correlated with their physical fitness. Therefore, the purpose of this study is to provide empirical information regarding the relationship between physical fitness, body mass index, and academic achievement of prospective sports teacher students. This research is a qualitative descriptive study through a survey at Sriwijaya University, Indonesia and Exile State University. The sample in this study were 101 prospective sports teacher students from physical education study program students at the Faculty of Teacher

Training and Education, Sriwijaya University and Exile State University of the Philippines.

The specific target of this research is produce scientific work in the form of publication of research results in reputable international journals Journal of Physical Education and Sport Q3 and publication of research results in reputable national journals indexed sinta-3 Journal of Physical Education and Sports.

The Technology Readiness Level (TKT) of this study is at level 4 with a complete research design and method. This collaborative research is expected to accelerate the study period of students of the Master of Sports Education program to contribute to the development of skills needed in facing the 21st century, as well as to produce scientific work that contributes to the development of science and technology, especially in the field of sports science. The research team has members who are experts in the field of sports including, tests and measurements, exercise physiology, and sports coaching. The research team also has publications in reputable international and national journals.

Keyword: Physical fitness, body mass index, academic achievement

PREFACE

Research entitled Profile of Physical Fitness, Body Index and Academic Achievement of Physical Education Teacher Candidates at Sriwijaya University, Indonesia and Pengasinan State University of the Philippines. This research is an International Research Collaboration research activity on PNBP FKIP Sriwijaya University funds in 2022.

The purpose of this study was to determine the level of physical fitness, body mass index and academic achievement of physical education students at Sriwijaya University and Pangasinan State University Philippines. By knowing the level of physical fitness, body mass index and academic achievement of Physical Education students of Sriwijaya University and Pengasinan State University of the Philippines, it can be used as a basis for institutions, especially the Physical Education Study Program, for both parties to develop physical fitness programs in the future in their respective study programs.

This research activity went well and was successful thanks to the collaboration of the master program (S2) in the sports education study program, the Teaching Faculty of Education Sciences, Sriwijaya University with Pangasinan State University, Philippines.

On behalf of the research team, we would like to thank all those who have helped carry out this research, especially the Chancellor of Sriwijaya University, Dean of FKIP Sriwijaya University, Head of LPPM Sriwijaya University.

Palembang. November 2022
Chief Researcher,

Dr. Iyakrus, M.Kes.

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CHAPTER 1
INTRODUCTION

1.1. Background

One of the objectives of achieving the physical and health education study program (Penjaskes) is to produce graduates who have the ability as educated educators in the field of physical and health education and are able to carry out their duties and obligations professionally and disseminate knowledge of various types and levels of education. Physical education teacher candidates need to have good physical fitness so that in the learning process they can achieve optimal results. The physical fitness of prospective Physical Education teacher students will greatly affect the competence and performance of students during their education period.

Physical education is health-oriented, therefore the physical education study program has objectives [1] namely to prepare students to be active, and to help students to carry out physical activities so that they can build habits, improve physical health. Physical fitness has a strong influence on student academic achievement [2]. Physical fitness is very important for the development of cognitive, motoric, and social abilities of students who are prospective sports teachers [3]. The relationship between physical fitness and academic achievement can be explained both from physiological and psychological mechanisms [4], where physical activity stimulates the development of brain tissue [5], increases circulation, increases blood flow to the brain, maintains norepinephrine and endorphins levels which together reduce stress, improves mood, stimulates calm after exercise, and allows for increased academic achievement [6]. A high level of physical fitness allows for a relationship with an increase in neurocognitive processes in students and physical activity can increase students' active behavior [7]. Low levels of physical fitness also affect body mass index [8] and academic achievement is also related to body mass index [9].

Body mass index (BMI) is the measurement of choice for many health care professionals to measure overweight and obesity in adults [10]. Student sports teacher candidates who have a high BMI will tend to achieve low academic scores [11]. The most prominent feature of student sports teacher candidates is maintaining physical fitness and healthy living behavior [12]. Physical activity and quality of life for prospective physical education sports teachers and sports teachers are higher than other education majors. However, based on the results of a study conducted by Huang et al [13] explaining body composition, nutritional habits and physical activity of students that 21.6% of prospective sports teacher students were overweight and 16.2% obese according to body mass index, and weekly physical activity. them less than 4 days/week.

The specific objective of this study was to obtain empirical information related to the level of physical fitness, body mass index, and academic achievement of prospective sports teacher students of the Physical Education FKIP Sriwijaya University. This research is expected to accelerate the completion of student theses by developing new ideas for learning physical and health education and increasing the number of publications at the international level.

1.2. Problem Statement

1.2.1. How is the level of physical fitness, body mass index and learning achievement of Physical Education students of the Teaching and Education Faculty (FKIP) Sriwijaya University

1.2.2. How is the level of physical fitness, body mass index and learning achievement of Pangasinan State University Philipines Physical Education students.

1.2.3. How is the level of physical fitness, body mass index and learning achievement of Physical Education students of the Teaching and Education Faculty (FKIP) Sriwijaya University and Physical Education students of the State University of the Philippines.

1.3. Research Purposes

1.3.1. Knowing the level of physical fitness, body mass index and learning achievement of Physical Education students of the Teaching and Education Faculty (FKIP) Sriwijaya University

1.3.2. Knowing the level of physical fitness, body mass index and learning achievement of Physical Education students of the State University of the Philippines.

1.3.3. Knowing the level of physical fitness, body mass index and learning achievement of Physical Education students of the Faculty of Teacher Training and Education (FKIP) Sriwijaya University and Physical Education students of Pengasinan State University of the Philippines.

CHAPTER 2
LITERATURE REVIEW

2.1. Academic Achievements

In society, academic achievement is considered as the main principle to assess the capacity and total potential of a person. Academic achievement has a very important place in education as well as in the learning process [14]. Academic achievement denotes knowledge acquired and skills developed in a field of knowledge, generally determined by test scores. Academic achievement is a general term for performance results in the intellectual domain taught in schools, colleges and universities [15]. Academic achievement shows the level of intellectual education of a person, group or entire nation [16]. Academic achievement is very important for adolescents because it provides opportunities for their success in the future [17]. Achievement is the result of an activity that has been done, created, both individually and in groups.

Achievements will never be produced as long as someone does not carry out activities. Academic achievement is influenced by personality, opportunities, motivation, training and education [18]. Other factors that affect student academic achievement are self-concept, study habits, parental encouragement, socioeconomic status, intelligence [14]. Learning is an effort to change behavior. Learning can be interpreted simply, namely, a process by which organisms acquire forms of behavioral change that tend to continue to influence the general behavior model leading to an increase [19]. The change in behavior consists of various modification processes towards a permanent form, and occurs in aspects of action, thinking, attitudes, and feelings [20]. Finally, it can be said that learning is nothing but gaining new experiences [21].

2.2. Physical Fitness

Fitness is the ability to lead a full and balanced life. A fit person has a healthy and happy outlook on life. Fitness is an absolute necessity for every human being, because it can foster independence and keep people mentally alert.

Physical fitness is very important for humans to adapt to their environment because their minds and bodies are in complete harmony [22]. The level of physical fitness is the level of a person's ability to carry out daily activities without causing significant fatigue [23]. The condition of physical fitness is the condition of students participating in activities in lectures, both practical lessons in the field and learning activities in the classroom [24].

A high level of physical fitness, especially for students, can maximize free time after activities without feeling tired which makes the body feel weak on an ongoing basis. The benefits of physical fitness are both physiological and psychological, protecting against the potential consequences of stressful events and preventing many chronic diseases [25]. Physical fitness is achieved through physical activity or regular exercise [26]. Physical fitness is divided into two categories, namely fitness related to health and fitness related to performance [27].

2.2.1. Endurance

Endurance is a physical element that needs to be trained and developed as a factor that greatly supports technical and tactical abilities in sports. Endurance is a factor that affects academic performance [28] [29]. The development of various physical components is integrated into multi-disciplinary training programs. Maintained high levels of speed and power and forced changes in speed require an emphasis on muscle preparation [30]. Many benefit from adding strength training to improve endurance performance. Endurance has a very important role in spinal stability during prolonged physical activity and protecting against injury [31].

Endurance is related to the ability of muscles to maintain local muscle activity. Demands to perform certain muscle group movements with a large number of repetitions. There are two types of endurance, namely general endurance and muscle endurance [32]. General endurance is a person's ability to perform moderate-intensity activities throughout the body and most muscles for long periods of time. Muscle endurance is the ability of the muscles to perform repeated contractions over a long period of time. Theoretically, training-induced

muscle adaptation can be an antagonist to increased endurance [33]. Endurance training causes hypertrophy of muscle fibers, associated with an increase in contractile protein, proportional to the increase in maximal contractile strength. Endurance training reduces mitochondrial density and decreases oxidative enzyme activity, which may inhibit endurance capacity, but has minimal effect on capillary density or conversion from fast (type II) to slow (type I) fibers [34].

2.2.2. Power

Strength is a fundamental quality required in achieving optimal physical function and is defined as the ability to produce more strength [35]. Strength has characteristics that include magnitude, speed and direction. The resulting force can be measured by isotonic, isometric or isokinetic methods. The isotonic technique requires lifting a certain load through a number of repetitions such as the 1RM test or using the prediction equation [36]. Isokinetic measurements involve the use of isokinetic devices. Isometric testing is performed with maximal voluntary contractions performed at a certain angle against unyielding resistance coupled with a strain gauge, cable tensiometer, force platform or similar device whose transducer measures the applied force [37].

Strength is a physical condition needed to increase learning achievement or sports achievement. Strength supports athlete performance and is a major point of emphasis in training to improve performance thereby helping reduce the likelihood of injury [38] Strength is one of the elements of physical condition which is very important in sports because it can help improve physical components such as speed, agility and accuracy [39]. Strength as energy or energy used to change the state of motion or shape of an object. Strength is closely related to the process of muscle contraction [40]. Muscles are located in almost all of the kinetic chain and are important for stabilizing the spine and pelvis, providing proximal stability for distal mobility and limb function during everyday activities and sports [41].

2.2.3. Speed

Speed is one of the basic biomotor abilities needed in every sport. Speed is defined as the ability to change direction quickly and accurately [42]. Speed is seen as a quality that is influenced primarily by physical qualities (eg leg muscle strength, reactive strength and power) and biomechanics (eg running technique). Speed is a state that is actually expressed through a comparison of distance and time. Running speed is a running movement that is done as fast as possible. The speed of the 100 meter sprint includes the distance run number. Speed of movement both in a straight line and when changing direction is a clear determinant of performance in many team sports [43]. Speed qualities such as acceleration require attention to maximize application performance in sports contexts.

Increasing speed can be done by increasing speed supporting components such as flexibility, muscle power, anaerobic endurance, movement coordination and running technique skills. One of the supporting factors for running speed is anatomical or body posture which includes height, length, size, width, and body weight [44]. Excellence in posture provides its own advantages in sports. Speed is needed because it is the ability to travel certain distances, especially short distances in the shortest possible time [45].

Speed is an important capital for professional athletes, because its implementation requires attacking quickly and then being required to

return to defense quickly when counterattacked by the opponent. One of the exercises that supports the athlete's speed is plyometric training. Plyometrics is a combination of speed and strength training. The combination of speed and power is a manifestation of muscle explosive power. Plyometric exercises involve movements that are used to strengthen muscle tissue and train nerve cells so that they can carry out a stimulus in the form of muscle contractions in a certain pattern so that the muscles can produce the strongest possible contractions in a short time. Plyometric exercises are very helpful in developing the entire neuromuscular system in order to support greater movement.

2.2.4. Flexibility

Flexibility is the ability to shift muscles and joints through their full range of motion [46]. Flexibility as the ability to perform movements with a greater range of motion or a large amplitude. In contrast, stretching refers to the process of elongating connective, muscle, and other tissues [47]. Flexibility is required for certain sport groups and certain joints and at certain speeds. For example, the dominant baseball player's shoulder has an increased external rotation range compared to the other shoulder.

Previous studies have found that throwing speed is significantly related to external shoulder rotation range [48]. Flexibility training focused on increasing joint ROM must be specifically tailored to the needs of the individual athlete and the sport he or she participates in. Flexibility is developed when the connective tissue and muscles are elongated through regular and proper stretching [49]. A person's level of flexibility is determined by the muscles and connective tissue. Stretching is a type of exercise that can lead to greater flexibility. Flexibility is the ability to stretch a muscle, but flexibility decreases over time when this tissue is not stretched or exercised regularly [50].

2.2.5. Explosion Power

Explosive power is one of the important biomotor components in sports activities, because explosive power will determine how hard a person can hit, how high to jump, how fast to run and so on [51]. The explosive power of the muscles is strongly influenced by two components of physical condition, namely muscle strength and speed [52]. The two components of this physical condition cannot be separated because in principle the two components of this physical condition work together to produce the explosive power of the muscles, and the basis of the formation of this power is strength, so before training the physical condition of power, strength must first be trained [53].

Muscular explosive power is a person's ability to exert maximum strength, with effort exerted in the shortest possible time [54]. Exercise given to athletes to increase explosive power is not only a load factor but must pay attention to the

speed of contraction factor. Explosive power is a component of physical condition that is very necessary for the performance of an athlete [55]. Strength is a much needed component in performance, especially in performance that is explosive in the muscles. Many sports require explosive power to be able to carry out activities properly, such as volleyball, basketball, athletics, boxing, gymnastics and so on. Muscle explosive power can be defined as the ability of a group of leg muscles to produce work in a very fast time. Explosive power is the ability of the muscles to overcome loads or resistance with very high contraction speeds. Muscle explosive power is a combination of several physical elements, namely strength and speed. This means that the explosive power of the muscles can be seen from the results of a performance carried out using strength and speed [56]. For example, the form of leg muscle explosive power is in the form of a jump when doing a Smash.

2.3. Body Mass Index

Body mass index (BMI) is a parameter that shows a person's weight is normal according to their height or not [57]. Body mass index is calculated by the proportion of body weight to the square of height (kg/m²) [58]. BMI is a criterion that shows the relationship between height and weight and is used in the evaluation of adiposity. The scores found with the body mass index were evaluated between the scales determined as follows [59].

1. 0-18.4 (Thin) indicates that your weight does not match your height
2. 18.5-24.9 (Normal) indicates that the weight corresponds to the height
3. 25.0-29.9 (Overweight) indicates that body weight exceeds height
4. 30.0-34.9 (Obesity I) is a signal that your body weight is very high compared to your height
5. 35.0-44.9 (Obesity II) is a signal that your body weight is very high compared to your height
6. > 45.0 (Over Obesity or Obesity III) is a signal that body weight is very excessive compared to height

The prevalence of obesity is currently one of the most serious health problems worldwide, due to frequently observed complications, such as diabetes and cardiovascular disease [60]. The role of physical educators in schools and universities has the main goal of fighting obesity [61]. Overweight and obesity have increased in recent decades among adolescents. One of the markers of overweight and obesity is a decrease in physical fitness caused by a decrease in the level of physical activity [62]. Overweight, obesity and low physical fitness are linked in the same way, and changes in one factor can cause changes in another [63].

Research in research grants is collaborative research, previously developing research instruments has been carried out until they meet the valid criteria. The research roadmap can be seen in Figure 1 below:

A. Targets, Strategic Programs, and Research Performance Indicators

No.	Research Program	2020		Final Target 2025
		Target	Performance Indicator	
Design and Implementation of Student and Student Physical Fitness				
1.	Physical fitness training	1. Improvement of students' physical fitness and athlete's physical fitness .	1. Improving the quality of students' physical fitness and athlete's physical fitness.	1. Increasing the physical fitness of students and athletes.
				external :

B. Targets, Strategic Programs, and Research Performance Indicators

No.	Research Program	2021		Final Target 2025
		Target	Performance Indicator	
Design and Implementation of Physical Fitness Training for Students and Athletes				
1.	Models and methods of physical fitness training and athletes	1. Improving the quality of sports training models and methods. 2. Development of sports training models. 3. Development of a physical test model.	1. Producing models of physical training for sports	The final model of physical fitness training for students and athletes to improve physical fitness
			External:	

C. Targets, Strategic Programs, and Research Performance Indicators

No.	Research Program	2022		Final Target 2025
		Target	Performance Indicator	
Implementation of Compilation of Exercise Programs to Improve Student Physical Fitness through the application.				
1.	Models and Methods for Compiling Student Physical Fitness Training Programs	1. Improving the quality of sports training program models for physical fitness. 2. Development of a physical fitness training model for students.	1. Generate a sports training program preparation model to improve physical fitness through applications	The final model for preparing a sports training program to improve student physical fitness.
			External :	

D. Targets, Strategic Programs, and Research Performance Indicators

No.	Research Program	2023		Final Target 2025
		Target	Performance Indicator	
Implementation of Compilation of Exercise Programs to Improve the physical fitness of athletes through applications.				
1.	Model and method of compiling a training program through an application	1. Improving the quality of sports training program models. 2. Development of sports training models. 3. Development of a sports training program preparation model	1. Generate a model for compiling a sports training program through an application	The final model for compiling a sports training program to improve the physical fitness of athletes through applications.
			External :	

E. Targets, Strategic Programs, and Research Performance Indicators

No.	Research Program	2024		Final Target 2025
		Target	Performance Indicator	
Implementation of Compilation of Exercise Programs to Improve the physical fitness of athletes through applications.				
1.	Model and method of compiling a training program through an application	1. Improving the quality of sports training program models. 2. Development of sports training models. 3. Development of a sports training program preparation model	1. Generate a model for compiling a sports training program through an application	The final model for compiling a sports training program to improve the physical fitness of athletes through applications.
			External :	

F. Targets, Strategic Programs, and Research Performance Indicators

No.	Research Program	2025		Final Target 2025
		Target	Performance Indicator	
Implementation of Compilation of Exercise Programs to Improve the physical fitness of athletes through applications.				

No.	Research Program	2025		Final Target 2025
		Target	Performance Indicator	
1.	Model and method of compiling a training program through an application	1. Improving the quality of sports training program models. 2. Development of sports training models. 3. Development of a sports training program preparation model	1. Generate a model for compiling a sports training program through an application	The final model for compiling a sports training program to improve the physical fitness of athletes through applications.
			External :	

Figure 3.1. Targets, Strategic Programs, and Research Performance Indicators

CHAPTER III
RESEARCH METHODS

3.1. Type of Research

The research that will be used is descriptive quantitative with a type of survey to see the level of physical fitness, body mass index and student academic achievement. Data collection techniques used measurements and tests which included height and weight, aspects of speed, muscle strength, agility, flexibility and endurance. The research subjects were 101 sports teacher candidates at Sriwijaya University, Indonesia and Pengasinan State University of the Philippines. This research was conducted on the campuses of Sriwijaya University, Indonesia and Pangasinan State University Philippines with a research period of March - November 2022. The data collected was then analyzed statistically using scores which were then calculated according to the category of level of physical fitness, body mass index and student academic achievement.

The stages of the research can be seen more clearly in the research flow in Figure 2.

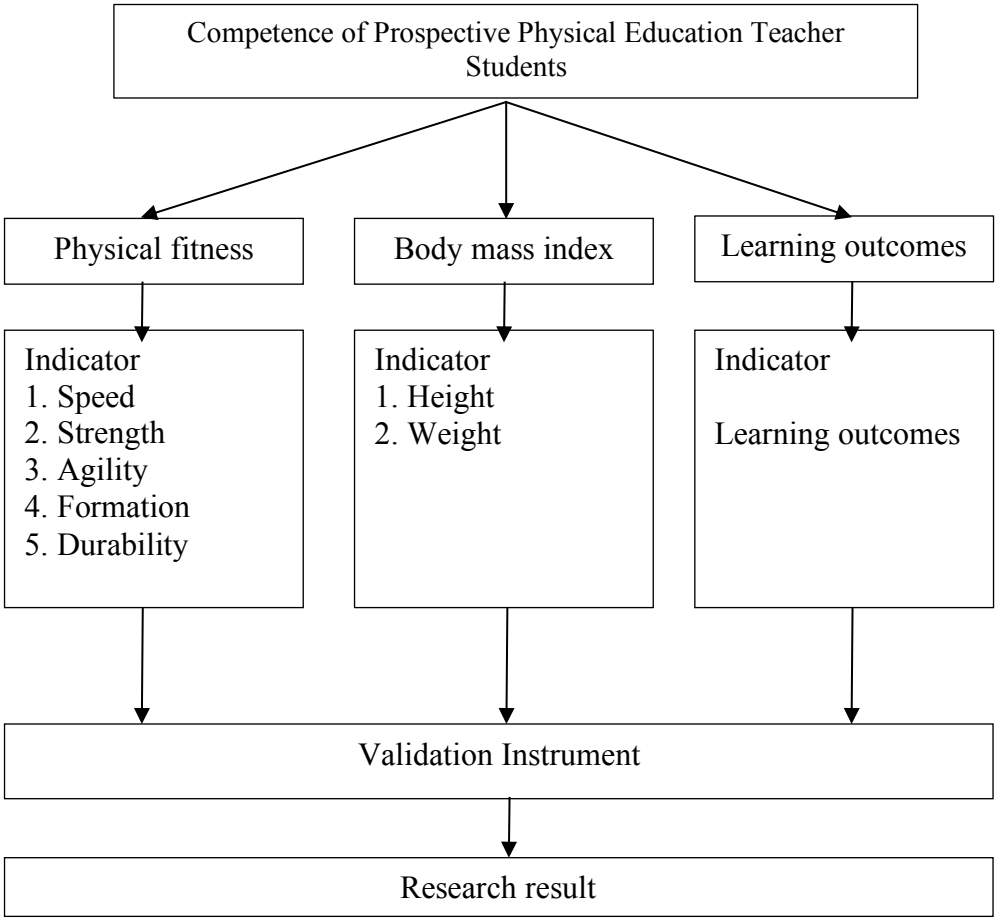


Figure 3.2 : Research Flow

Each research member has their own duties and responsibilities. The duties and responsibilities of researchers are clearly illustrated in Table 1.

Table 3.1. Distribution of Duties of the Research Team

No	Name/NIDN/NIM	Position	Task
1	Dr.Iyakrus, M.Kes/	Chief Researcher	1. Guiding and designing research implementation 2. Guiding article writing 3. Provide direction for the preparation of research proposals and reports (progress and final).
2	Dr. Hartati, M.Kes.	Member	Preparation of concepts and forms of student physical fitness tests.
3	Dr. Meirizal Usra, M.Kes.	Member	Preparation of literature review, literature study, and checking of

			proposals.
4	Dr. Wahyu Indra Bayu, M.Pd.	Member	Preparation of research instruments
5	Dinda Dwi Cahyuni, S.Pd.	Member	Coordinating research samples
6	Heri Nugroho, S.Pd.	Member	Coordinate research tools and facilities
7	Romi Yudhistira, S.Pd.	Member	Recording student physical fitness test results
8	Eries Alpheba Hadinata, S.Pd.		Recapitulating student physical fitness results per test item.

Table 3.2. Achievement Target Plan

No	External Type	Achievement Indicator
1	Publikasi jurnal internasional bereputasi *Journal of Physical Education and Sport* Q3 dengan H-Index 27 dan SJR 0.35	Accepted
2	Publikasi jurnal nasional bereputasi terindeks sinta-3 Jurnal Pendidikan Jasmani dan Olahraga.	Accepted

Table 3.3. Schedule of Activities

No	**Activity**	**Implementation (Month)**									
		1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
1	Proposal Preparation	■	■								
2	Proposal Submission	■	■								
3	Research Design	■	■	■	■						
4	Research Implementation					■	■				
5	Dissemination of Research Results							■	■	■	
6	Preparation of Research Results Report								■	■	
7	Improvement of Research Results								■	■	
8	Report Collection								■	■	
9	Scientific articles								■	■	■

3.2 Research subject

The research subjects were students of Physical Education study program, FKIP Sriwijaya University and 101 students of Physical Education Study Program, State University of the Philippines.

3.3 Data Analysis Techniques

Data analysis techniques used quantitative descriptive with percentages. The data collected was then analyzed by categorizing the level of student physical fitness, body mass index and academic achievement of physical education study program students, FKIP Sriwijaya University.

CHAPTER IV
RESULTS AND DISCUSSION

4.1. Research result

The results of this study consist of aspects of physical fitness components including VO2 Max, running speed, leg muscle flexibility, leg muscle explosive power, arm muscle strength, then components of Body Mass Index (BMI) and components of student achievement index (GPA). Table 1 shows the results of the physical fitness of physical education students.

Table 4.1. Results of physical fitness VO2 max Student.

No	Components	Category					Total
		Very Good	Good	Sufficient	Poor	Very Less	
1	VO2max	5	10	15	31	40	101
2	Percentage (%)	4.9	9.9	14.8	30.6	39.6	

In Table 1 above, there is a VO2max physical fitness of Sriwijaya University physical education students in the very good category of 1 person (4.9%), in the good category as many as 10 people (9.9%), in the sufficient category as many as 15 people (14.8%), in the poor category as many as 31 people (30.6%), and very less category as many as 40 people (39.6).

Table 4.2. Data on Physical Fitness Results Student running speed.

No	Compenents	Category					Total
		Very Good	Good	Sufficient	Poor	Very Less	
1	Speed	3	6	22	28	42	101
2	Percentage (%)	2,9	5.9	21.7	27.7	41.5	

In Table 2 above, there are physical fitness running speed of Sriwijaya University physical education students in very good category 3 people (2.9%), good category 6 people (5.9%), sufficient category 22 people (21.7%), poor category 28 people (27.7%), and very less category as many as 42 people (41.5).

Table 4.3. Data on Physical Fitness Results Student limb muscle flexibility.

No	Components	Category					Total
		Very Good	Good	Sufficient	Poor	Very Less	
1	Flexibility	11	21	32	19	19	101
2	Percentage (%)	10.8	20.7	31.6	18.8	18.8	

In Table 3 above, there is physical fitness and flexibility of the leg muscles in physical education students at Sriwijaya University, in the very good category, 11 people (10.8%), in the good category, in 21 people (20.7%), in the sufficient category, in 32 people (31.6%), in the poor category, in 19 people (18.8%), and very less category as many as 19 people (18.8%).

Tabel 4.4. Data on Physical Fitness Results Student leg muscle explosiveness.

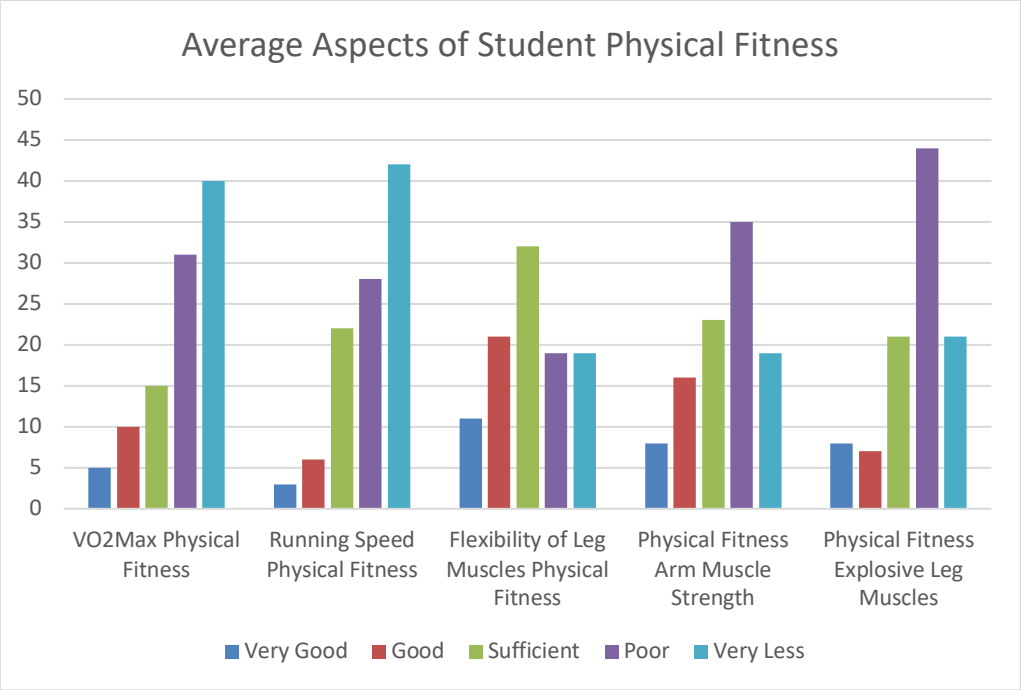
No	Components	Category					Total
		Very Good	Good	Sufficient	Poor	Very Less	
1	Explosive Power	8	16	23	35	19	101
2	Percentage (%)	7.9	15.8	20.7	34.6	18.8	

In Table 4 above, there is physical fitness for the explosive power of the leg muscles in physical education students at Sriwijaya University, in the very good category, 8 people (7.9%), in the good category, 16 people (15.8%), in the sufficient category, 23 people (20.7%), in the poor category. as many as 35 people (34.6%), and very less category as many as 19 people (18.8).

Tabel 4.5. Physical fitness results data Student's arm muscle strength.

No	Components	Category					Total
		Very Good	Good	Sufficient	Poor	Very Less	
1	Arm Muscle Strength	8	7	21	44	21	101
2	Percentage (%)	7.9	6.9	20.7	43.5	20.7	

In Table 2 above, there is physical fitness for arm muscle strength in physical education students at Sriwijaya University, in the very good category, 8 people (7.9%), in the good category, 7 people (6.9%), in the sufficient category, 21 people (20.7%), in the poor category, 44 people (43.5%), and very less category as many as 21 people (20.7). Below is a graph of the average physical fitness component VO2 Max, running speed, leg muscle flexibility, leg muscle explosive power, and arm muscle strength.



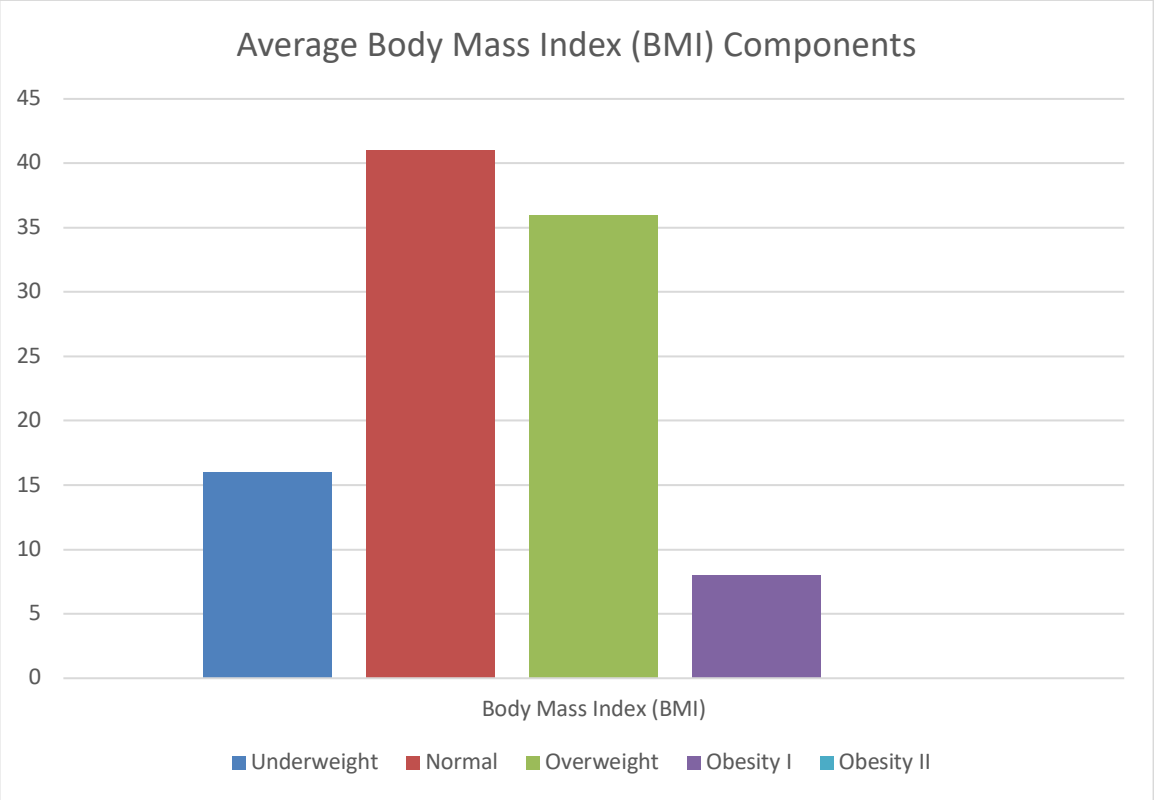
Graph 1: Aspects of Student Physical Fitness

The following is the results of the student's body mass index (BMI)..

Table 4.6. Student Body Mass Index (BMI) Results Data.

No	Components	Category					Total
		Underweight	Normal	Overweight	Obesity I	Obesity II	
1	Bpdy Mass Index (BMI)	16	41	36	8	0	101
2	Percentage (%)	15.8	40.5	35.6	7.9	-	

Based on the data on the results of the student body mass index (BMI) above, there were 16 people in the underweight category (15.8%), in the normal category there were 41 people (40.5%), in the overweight category there were 36 people (35.6%), in the obesity category 1 there were 8 people (7.9%). %) and there were no students with obesity category II. Below is a graph of the average results of student body mass index (BMI) component data.



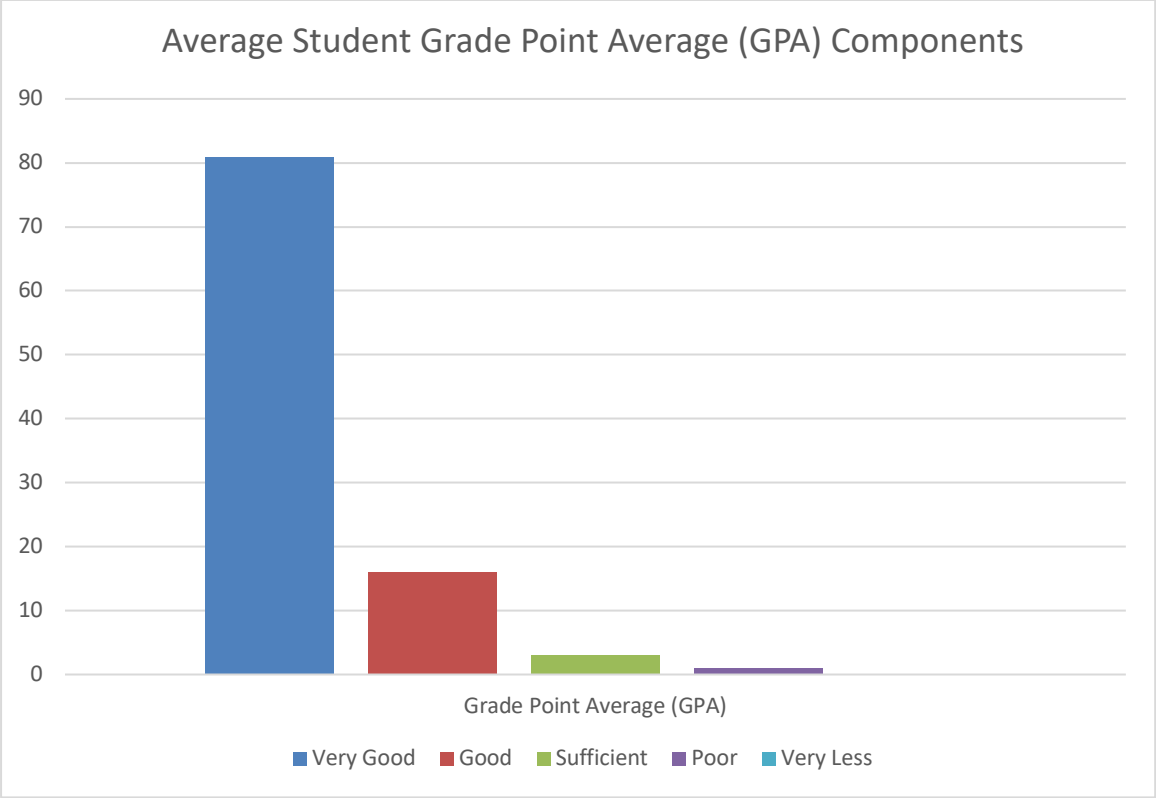
Graph 2: Components of Body Mass Index (BMI)

The following is the results of the Student Academic Achievement Index (GPA)..

Table 4.7. Student Academic Achievement Index Result Data

No	Components	Category					Total
		Very Good	Good	Sufficient	Poor	Very Less	
1	Grade Point Average (GPA)	81	16	3	1	0	101
2	Persentase (%)	80.1	15.8	2.9	0.9	-	

Based on the data on the results of student academic achievement above, there are very good categories totaling 81 people (80.1%), good categories totaling 16 people (15.8%), sufficient categories totaling 3 people (2.9%), less categories amounting to 1 person (0.9%) and there were no students with obesity category II. Below is a graph of the average results of the student achievement index (GPA) component data.



Graph 3. Components of the Academic Achievement Index (GPA)

4.2. Discussion

Success in the educational process is usually related to several complex variables, such as individual quality, socio-cultural-economic environment, and school realities, which can directly or indirectly affect student academic performance. The quality of life of students plays a key role in their academic performance. Implementing healthy habits (including physical activity) in

adolescence appears to be quite important for increasing academic achievement and can be a capital for maintaining a healthy lifestyle in the future.

Physical fitness is a condition that is owned or achieved by someone regarding the ability to carry out physical activities. Physical fitness is related to health when physical activity can be carried out without undue fatigue, is maintained for life and consequently has a lower risk for early chronic disease [64]. A person who is physically and mentally healthy can carry out daily activities diligently, is less likely to experience health problems and can enjoy sports and other events. Physical fitness is divided into two aspects, namely fitness related to health and fitness related to skills [65]. Physical fitness related to health includes: 1) cardiac endurance, 2) muscle strength, 3) muscle endurance, 4) flexibility and 5) body composition. Physical fitness related to skills are 1) speed, 2) energy, 3) balance, 4) agility, 5) coordination and 6) reaction speed. Physical fitness is associated with cognitive function, especially the ability to understand a concept and analyze a problem. Regular physical activity poses no danger and is associated with student academic performance [66].

Academic achievement is an assessment of learning activities and reflects student learning achievement in a certain period. Academic achievement includes cognitive, affective, and psychomotor domains. Measurement of academic achievement aims to reveal problems in the learning process as well as being the basis for the formulation of the development of learning models. In general, there are two factors that affect academic achievement, namely internal factors and external factors. Internal factors include physical factors such as health and disability, psychological factors such as intelligence, talent, motivation and learning readiness and fatigue factors. Individual external factors include parental support, school and teacher conditions as well as community conditions such as friends hanging out, and forms of community life.

Internal factors, including students' physique, are alternative measures for measuring body mass index which are divided into four categories, namely thin, regular and obese. Obesity status and lack of physical activity have implications

for students' cognitive function and academic achievement [67]. Academic achievement can be influenced by several factors, one of which is physical fitness. Components of physical fitness that can be used as indicators include strength and speed. Physical fitness is used to support physical work activities which are ultimately expected to improve learning achievement. Research conducted by Sabia [68] found that there was a significant negative relationship between body weight and academic average scores, as body weight increased, academic average scores decreased. Being overweight or obese may not be the only factor that contributes to an increase or decrease in one's academic performance. Crosnoe and Muller [69] found lower achievement in adolescents who are at risk for obesity.

Excessive fat percentage is associated with increased morbidity and mortality. Body mass index (BMI) is a basic and simple indicator for comparing an individual's body status with a standard population, but it should be noted that a person's BMI value can be associated with different body fat percentages that are influenced by age, sex, ethnicity, or individual differences. A high BMI score could be a sign of an unhealthy lifestyle and increased internal stress in students which can affect their performance in college [70]..

Body Mass Index (BMI) can be used to assess obesity which is associated with several health conditions such as cardiovascular, metabolic, pulmonary, bone and psychosocial disorders. Research by Rauner and Woll [71] explains that student achievement in Spain is positively related to the level of physical fitness. Male students with excess body weight have lower academic achievement than male students with average body weight. The facts show that efforts to improve student fitness through exercise have not been a significant concern for education in Indonesia. Sports training as an effort to maintain or achieve ideal body weight conditions is considered to be able to contribute to the achievement of good learning outcomes.

CHAPTER V
CONCLUSIONS AND SUGGESTIONS

14.1. Conclusion

Based on the research results it can be concluded :

14.1.1. The level of physical fitness of students of the Physical Education Study Program, FKIP, Sriwijaya University, is in the very poor category

14.1.2. The body mass index level of physical education study program FKIP Sriwijaya University students is in the normal category

14.1.3. The level of learning achievement index of students of the Physical Education Study Program, FKIP, Sriwijaya University, is in the very good category.

14.2. Suggestion

The suggestions for this research are :

1. The study program is expected to develop a physical fitness program for students by involving physical education lecturers on a regular basis.
2. The Physical Education study program must revise the curriculum so that students can improve their students' physical fitness.

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Attachments : 1

A. Identity of the Head Researcher

1	Full Name (with title)	Dr. Iyakrus, M.Kes
2	Gender	Laki laki
3	Functional	Lektor Kepala/IV B
4	NIP/NIK/other identity	196208121987021002
5	NIDN	0012086205
6	Place and date of birth	Salimpaung, 12 Agustus 1962
7	E-mail	iyakrus@fkip.unsri.ac.id
8	Phone number	+6281373292525
9	Office address	Jalan raya Palembang Prabumulih Km.32 Indralaya Kab.Ogan Ilir
10	Phone number	
11	Produced Graduates	S-2 = 30 people;
12	Phone number	
13	Covered Courses	1. Metologi Penelitian Penjas
		2. Metodologi latihan
		3. Filsafat Olahraga

B. Educational background

	S-1	S-2	S-3
College Name	IKIP Padang	Univ Airlangga	UNNES
Knowledge field	Kepelatihan Olahraga	Kesehatan Olahraga	Pendidikan Olahraga
Entry-Graduation Year	1982	1992	2011
Title of Thesis/Thesis/Dissertation	-	Pengaruh Latihan Lompat Irama Cepat Dan Lompat Irama Lambat Terhadap Dayaledak, Kekuatan Dan Daya	Pengembangan Model Latihan Fisik Untuk Atlet Sepaktakraw

		Tahan Otot Tungkai	
Name of Advisor/Promoter		Prof. Dr. Soekarman Dr. Tauhid Al Amin	Prof. Dr. Tandyo Rahayu, M.Pd. Dr. Setya Rahayu , M.Kes.

C. Research Experience in the Last 5 Years

No.	Year	Judul Penelitian	Funding	
			Source	Amount (Million IDR)
1	2014	Aerobic Endurance (Vo2 MAX) Level of Physical Education COED in Sriwijaya University	Unsri	10.000.000. ,
2	2016	Physical Education Learning Model With Game Approach to increase Phisical Freshness Elementary School Students	Mandiri	
3	2014	Physical Exercise Model for Tekong Athlet Sepaktakraw Sriwijaya University	Mandiri	
4	2014	Konsep Pendidikan Jasmani dan Olahraga Melalui Pendekatan Permainan di SD.	Mandiri	
5	2015	Tingkat keterampilan bermain sepaktakraw mahasiswa Penjaskes FKIP Unsri	Mandiri	
6	2015	Tingkat Kebugaran Fisik atlit PPLM Sumsel	Mandiri	
7	2013	Kebugaran fisik mahasiswi penjaskes Fkip universitas sriwijaya	Mandiri	
8	2016	KEBUGARAN FISIK ATLET PON XIX 2016 SUMATERA SELATAN CABANG OLAHRAGA SEPAKTAKRAW	Mandiri	
9	2016	The Model of Flexibility Exercise for Young Athlet Sepaktakraw to Improve Sepaksila Ability.	Mandiri	

10	2016	Enhancement 102 Movement Skills through Accompaniment Limb Muscles Power Exercise of PPLP South Sumatera Diving Athlete	Mandiri	
11	2016	Model Test Fisik Untuk Atlit Melalui Aplikasi	PNBP FKIP Unsri 2016	10.000.000.
12	2017	Pengembangan Model Test UntukMengukur Kemampuan Fisik Atlit Senior Melalui Aplikasi	PNBP FKIP 2017	29.000.000.
13	2018	Pengembangan Model Pembelajaran Penjaskes Melalui Pendekatan Permainan Di Sekolah Dasar	Anggaran DIPA Unsri	33.000.000.
14	2019	Pengembangan Model Test Cabang Olahraga Untuk Mengukur Kebugaran Fisik Atlit Pon (Pekan Olahraga Nasional) Sumatera Selatan Tahun 2020 Melalui Aplikasi	Anggaran Dipa Unsri	35.000.000.
15	2020	THE RELATION PHYSICAL PHYSICAL FITNESS AND THE CUMULATIVE ACHIEVEMENT INDEX OF PHYSICAL EDUCATION AND PHILIPINA NORMAL UNIVERSITY STUDEN	Anggaran Dipa FKIP	Rp.100.000.000.

D. Community Service Experience in the Last 5 Years

No.	Year	Title of Community Service	Funding	
			Source	Jml (Juta Rp)
1	2015	Kepelatihan, tes fisik atlet Pelatda PON	KONI	

		Sumatera Selatan	Sumsel	
2	2016	Test Fisik atlet PON Sumatera Selatan	KONI Sumsel	
3	2017	Kepelatihan penyusunan program latihan olahraga	Dispora Sumsel	
4	2018	Pelatihan Penulisan Proposal Penelitian Olahraga Bagi Guru Smk Negeri 2 Kota Palembang	FKIP UNSRI	12.500.000.
5	2019	Pelatihan Penerapan Model Test Pengukuran Bagi Guru Olahraga Melalui Aplikasi Untuk Mengukur Kebugaran Fisik Atlit	PNBP Universitas Sriwijaya	12.500.000.

E. Publication of Scientific Articles in Journals in the Last 5 Years

No.	Scientific Article Title	Journal Name	Volume/Number/Year
1	Sistem Energi Dan Serabut Otot Dominan Pada Permainan Sepak Takraw	Jurnal Ilmu Olahraga & Kesehatan	Vol:1 No:2 ISSN: 2078-927X/2011
2	Penerapan *Closed Skill* Dan *Open Skill* Dalam Latihan Sepak Takraw di Penjas FKIP Universitas Sriwijaya	Jurnal Ilmu Olahraga & Kesehatan	Vol:2 No:1 ISSN: 2078-927X/2012
3	Johan Cruff Keberhasilan Klub Sepakbola Barcelona	Jurnal Ilmu Olahraga & Kesehatan	Vol:2 No:2 ISSN: 2078-927X/2012
4	Physical Exercise Model for Tekong Atlete Sepak Takraw Sriwijaya University.	AUSC International Conference 2014	2014

F. **F. Presenter in Scientific Seminars (Oral Presentation) in the Last 5 Years**

No.	Name of Scientific Meeting	Scientific Article Title	Time and place

	/ Seminar		
1	Seminar Nasional	Peran Pendidikan Jasmani Dalam Pembentukan Komponen Fisik Untuk Meraih Prestasi Olahraga	30 Nopember 2015, Palembang
2	Seminar Nasional PGSD	Membangun Kepribadian Atlit Melalui Aktifitas Fisik Di Sekolah Dasar.	Palembang, PGSD 2015.
3	Seminar Nasional Penjaskes	Kebugaran Fisik Atlet Pon Xix 2016 Sumatera Selatan Cabang Olahraga Sepaktakraw	28 April 2016 Palembang.
4	Suliet 2016, Seminar International	Aerobic Endurance (Vo2max) Level Of Physical Education Coed In Sriwijaya University	tgl 7 – 9 Oktober 2016 di Palembang
5	The International Conference on Sport Science, Health, and Physical Education (ICSSHPE 2016) UPI Bandung	The Model of Flexibility Exercise for Young Athlet Sepaktakraw to Improve Sepaksila Ability.	Tgl 16-17 Nopember , 2016 di Bandung
6	ICTTE FKIP UNS	Enhancement 102 Movement Skills through Accompaniment Limb Muscles Power Exercise of PPLP South Sumatera Diving Athlete	23 – 24 Nopember 2016 di Solo
7	The 4th Ismina The 4th International Conference On Physical Education, Sport, And Health (Ismina) And Workshop,	Physical Fitness Of South Sumatera Football Athletes For Pon Xix 2016	UNIVERSITAS NEGERI SEMARANG, April 12th, 2017
8	Communication Forum of Teaching Training and Education Faculty Leaders-International Conference of Education 2017 held at Tadulako University	Survey Of Physical Fitness Level For Elementary And Junior High School Student In Palembang-South Sumatera.	Tadulako University Palu – Indonesia, on 19-20 May 2017

G. Book Works in the Last 5 Years

No.	Book title	Year	Number of pages	Publisher
1	Permainan Sepaktakraw	2013	160	Unsri

H. HKI Acquisition in the Last 5–10 Years

No.	HKI Title/Theme	Year	Type	Number P/ID
1				
2				
3				
dst				

I. Experience in Formulating Public Policy/Other Social Engineering in the Last 5 Years

No.	Title/Theme/Other Types of Social Engineering that Have Been Implemented	Year	Place of Application	Community Response
1				
2				
3				
dst				

J. Awards in the Last 10 years (from government, association or other institutions)

No.	Award Type	Award Giving Institution	Year
1	Ketua Bidang Hukum Dan Peraturan PB PSTI	PB PSTI	2010 - 2012
2	Sport Science dan IPTEK KONI SUMSEL	KONI Sumsel	2010 – 2015

3	Tim Satgas Pelatda Sumsel PON XVIII	KONI Sumsel	2012
4	Tim Seleksi Pelatih SONS	KONI Sumsel	2016, 2017
5	Tim Seleksi Pelatih PPLP	Dispora Sumsel	2016
6	Tim Pendampingan PPLP Sumsel	Dispora Sumsel	2014-2015
7	Konsultan Pembinaan Olahraga Kabupaten Muara Enim	Pemda Kab. Muara Enim Sumsel	2017
8	Ketua Bidang Pertandingan PORPROV 2017 di Lubuk Linggau	KONI Sumsel	2017
9	Ketua Program Olahraga Sumsel Sriwijaya 2020 KONI Sumsel	KONI Sumatera Selatan	2018
10	Ketua Bidang Pertandingan PORPROV Sumsel 2019	KONI Sumsel	2019
11	Tim Seleksi Sekolah Olahraga dan PPLP Sumsel 2019	Dispora	2019
12	Tim Seleksi Sekolah Olahraga dan PPLP Sumsel 2020	Dispora	2020
	Tim Seleksi Sekolah Olahraga dan PPLP Sumsel 2021	Dispora	2021

Palembang, November 2022
I made

Dr. Iyakrus, M.Kes

Attachment 2: Schedule of Research Activities.

No	Activity	Month								
		April	Mei	June	July	August	Sept	Okt	Nov	Des
1	Management of Research Permits	*								
2	Research Preparation		*							
3	Research sample preparation			*						
4	Preparation of Research Design				*					
5	Instrument Validation					*				
6	Instrument trials					*				
7	Test taking						*			
8	Article preparation				*					
9.	Data analysis preparation								*	
8	Preparation of reports						*			
9	Results Seminars							*		
10	Final report								*	

Attachment 3: Research Pictures.

Picture 1 : Erwin (Philippine State University Pangasinan Research Team)

Picture 2: Research Team and test technical team

Picture 3 : The technical team gives a briefing

Attachment 4 : Student Engagement

Picture 2 : Physical Fitness Test

Picture 3 : Physical fitness test

Attachment 5 : Names of Research Subjects

Name of Research Subject Student

No	Nim	Nama
1	06061082025083	AL FARIT
2	06061082025139	GEHARD SINAGA
3	06061082025099	JODI GANDALA PUTRA
4	06061082025086	AMANDA RIANDINI O
5	06061082025140	LANANG SEDAYU
6	06061082025135	M. PUTRA BUNGSU
7	06061082025101	M. RIDHO MALIKI
8	06061082025136	MEUTIA HELMI
9	06061082025131	MUHAMMAD ASRUL
10	06061082025106	MUHAMMAD REDHO
11	06061082025118	RIZKY RIDHO PRATAMA
12	06061082025123	SITI NYAYU ERISKA
13	06061082025126	M. FAISOL ADE P
14	06061082025112	NUR BUDHI UTAMA
15	06061082025133	PRATAMA ANUGERAH ESA
16	06061082025115	PUTRI ANGGRAENI
17	06061082025128	RANGGA
18	06061082025116	RANI ARISCA
19	06061082025127	RIKO NANDA SAPUTRA
20	06061082025121	SHELLA UDIANA WATIKASARI
21	06061082025122	SISKA SAISADA
22	06061082025124	WIETA DEVY ALISHA
23	06061082025141	NASWIRANTO
24	06061082025111	NIKMATUN NAZILAH
25	06061082025084	AL HAFIZH SAPUTRA
26	06061082025085	ALAMSYAH
27	06061082025100	JORDY EVENETUS
28	06061082025088	ANGGAR SETIA BUDI
29	06061082025089	ANIESA RESWAYA
30	06061082025090	ARDI JULRIANSYAH
31	06061082025134	BUDI PRATAMA
32	06061082025091	DEWI MOTIK
33	06061082025093	ENDANG PRATIWI
34	06061082025094	FARHATANI

35	06061082025107	NABILA
36	06061082025108	NADIA DESTURIA R
37	06061082025138	FERNANDO
38	06061082025096	IBNU YASA
39	06061082025098	ISMAH NURMULKIAH
40	06061082025103	MEIDYAN SAPUTRA
41	06061082025109	NAJMI ALVIN ZUHAIR
42	06061082025110	NENES NURUL F
43	06061082025137	REZA ALFARANDI
44	06061082025119	ROFIFAH HARUL AISYAHTUL M
45	06061082025120	SANDI ABDIANSYAH
46	06061082025082	ADE VINA MARDILA
47	06061082025113	NUR FADILAH ARIFAI
48	06061082025114	OKI ISLAMBAD
49	06061082025087	AMELIA AGUSTINA
50	06061082025092	EMILIA SUTRSNAWATI
51	06061082025095	FARIS NAUFAL
52	06061082025097	IRA ASTONIA SUHANTY
53	06061082025129	M. ALDO TEJA PRATAMA
54	06061082025102	M. ROBI ALZA
55	06061082025104	MUHAMMAD ALRIZKY
56	06061082025105	MUHAMMAD BIMA
57	06061082025081	MUHAMMAD HIDAYAT
58	06061082025132	MUHAMMAD ROMADHON
59	06061082025117	RISKA LESTARI
60	06061082025125	WINDIYA RAHAYU
61	06061181924001	M. ZERI
62	06061181924002	SENDI ADI PRANATA
63	06061181924003	RADA PRAYOIS
64	06061181924004	AGNES SOPIYAH MALIZA
65	06061181924005	MUHAMAD RIAN
66	06061181924006	GULI SEPTI ARISKI
67	06061181924007	BRIGITA CANDRA S
68	06061181924008	SIRLI NURHALIZAH
69	06061181924009	IDA MELANI
70	06061281924010	YESSICA ERMAWATI
71	06061281924011	DIANA TIARA
72	06061281924012	IMAS NITI HANIFAH
73	06061281924014	JENI PADILA

74	06061281924015	JUAN SUGESTI VERON
75	06061281924016	HIDAYATUL AKBAR
76	06061281924017	RISKI MELHAKI
77	06061281924018	RIRIN PURNAMA
78	06061281924019	MEILADI MULYA SYAHPUTRA
79	06061281924020	RIFKI FACHREZA PRATAMA
80	06061281924021	AHMAD MUZAKKI
81	06061281924022	OKKY PUTRA ALWIN PRATAMA
82	06061281924023	ARJUN NURZALLA R.S
83	06061281924024	A JUMEIDI KESUMA
84	06061281924026	MUHAMMAD DANIZ PATRIA
85	06061281924027	M. BAGAS PRASETYO AJI
86	06061281924028	PUJA SRIAYU
87	06061281924029	RIZKI DWI OKTARIO BONGGA
88	06061281924030	FINDI XAVERIUS
89	06061281924031	DWI PRASETIYA
90	06061281924032	DWI SARTIKA
91	06061281924033	NURPAJRIWATI
92	06061281924034	MUHAMMAD ALIEF PURWANTO
93	06061281924035	SYARI'AH
94	06061181924066	TIARA VALENTINA
95	06061181924067	NOVITA YANSA
96	06061181924068	MARYANI
97	06061281924069	INDIRA CANDRINI
98	06061181924070	DESI ISNAWATI
99	06061281924071	MUHAMMAD HAMZAH SHOLEH
101	06061281924072	JERRY KURNIAWAN
102	06061181924073	ARDA
103	06061281924074	MAKMUN AROZI
104	06061281924075	YUNDA ANISA
105	06061181924076	AKBARI
106	06061181924077	OVIN SITI MAIMUNAH
107	06061281924078	LUTHFIYAH SYAHARANI

Lampiran 6 : Research Form Format

A. Physical Fitness Test Format

Name :

Gender :

Place and date of birth :

Student registration number :

Height :

Weight :

Semester :

GPA (Cumulative Assessment index):

Study Program :

University :

No	Komponen Test	Item Test	Test Results			Average	Description
			I	II	III		
1	Speed	Sprint 20 Meter					
2		Sprint 60 Meter					
3	Strength	Sit up 2 menit					
4		Push up 1 menit					
5		Pull up 1 menit					
6	Agility	Shuttle Run Test (8 x 5 Meter)					
7	Flexibility	Sit and Reach					
8	Leg muscle power	Vertical Jump test					
		Standing long jump test					

9	muscle endurance (vo 2 max)	Bleeb test					

Palembang, …. Juni 2022

TTD

_____

B. Physical Activity Format

Name :

Gender :

Place and date of birth :

Student registration number :

Study Program :

University :

INTERNATIONAL PHYSICAL ACTIVITY QUESTIONNAIRE

We are interested in finding out about the kinds of physical activities that people do as part of their everyday lives. The questions will ask you about the time you spent being physically active in the **last 7 days**. Please answer each question even if you do not consider yourself to be an active person. Please think about the activities you do at work, as part of your house and yard work, to get from place to place, and in your spare time for recreation, exercise or sport.

Think about all the **vigorous** activities that you did in the **last 7 days**. **Vigorous** physical activities refer to activities that take hard physical effort and make you breathe much harder than normal. Think *only* about those physical activities that you did for at least 10 minutes at a time.

1. During the **last 7 days**, on how many days did you do **vigorous** physical activities like heavy lifting, digging, aerobics, or fast bicycling?

1. _____ ***days per week***

☐ No vigorous physical activities → ***Skip to question 3***

2. How much time did you usually spend doing **vigorous** physical activities on oneof those days?

2. _____ ***hours per day***

_____ **minutes per day**

☐ Don't know/Not sure

Think about all the **moderate** activities that you did in the **last 7 days**. **Moderate** activities refer to activities that take moderate physical effort and make you breathe somewhat harder than normal. Think only about those physical activities that you didfor at least 10 minutes at a time.

3. During the **last 7 days**, on how many days did you do **moderate** physical activities like carrying light loads, bicycling at a regular pace, or doubles tennis? Do not include walking.

3. _____ ***days per week***

☐ No moderate physical activities → ***Skip to question 5***

4. How much time did you usually spend doing **moderate** physical activities on oneof those days?

4. _____ ***hours per day***

_____ **minutes per day**

☐ Don't know/Not sure

Think about the time you spent **walking** in the **last 7 days**. This includes at work and athome, walking to travel from place to place, and any other walking that you have done solely for

recreation, sport, exercise, or leisure.

5. During the **last 7 days**, on how many days did you **walk** for at least 10 minutesat a time?

5. _____ ***days per week***

☐ No walking ***Skip to question 7***

6. How much time did you usually spend **walking** on one of those days?

6. _____ ***hours per day***

_____ **minutes per day**

☐ Don't know/Not sure

The last question is about the time you spent **sitting** on weekdays during the **last 7 days**. Include time spent at work, at home, while doing course work and during leisure time. This may include time spent sitting at a desk, visiting friends, reading, or sitting orlying down to watch television.

7. During the **last 7 days**, how much time did you spend **sitting** on a **week day**?

7. _____ ***hours per day***

_____ **minutes per day**

☐ Don't know/Not sure

This is the end of the questionnaire, thank you for participating.

Lampiran 7 : Research Journal Acceptance

Date: 25 October 2022

ICSSPEH 2022

International Conference on Sports Science, Physical Education, and Health
Online Virtual Conference, 28-29 October 2022
Website: http://seminars.unj.ac.id/icsspeh2022

Email: icsspeh2022@unj.ac.id

Letter of Acceptance for Abstract

Dear Authors: Iyakrus- Achmad Sofyan Hanif- Finga Fitri Amanda3*- Meirizal Usra- Wahyu Indra Bayu- Arizky Ramadhan

We are pleased to inform you that your abstract (ABS-67, Oral Presentation), entitled:

"Level Of Physical Fitness, Body Mass Index (Bmi) and Academic Achievement of Sriwijaya University Physical Education Students During The Covid 19 Pandemic"

has been reviewed and accepted to be presented at ICSSPEH 2022 conference to be held on 28-29 October 2022 in Jakarta, Indonesia.

Please submit your full paper and make the payment for registration fee before the deadlines, visit our website for more information.

Thank You. Best regards,

Dr. Eka Fitri Novitasari, M.Pd ICSSPEH 2022 Chairperson

Lampiran 8 : Research Journal Acceptance

KEMENTERIAN PENDIDIKAN, KEBUDAYAAN, RISET, DAN TEKNOLOGI UNIVERSITAS NEGERI MALANG (UM)

6TH INTERNATIONAL CONFERENCE ON SPORTS SCIENCE AND HEALTH (ICSSH 2022)

Jalan Semarang No.5, Malang 65145 Phone Number : 0341-551312 Website : www.um.ac.id

Letter of Acceptance

Malang,08-Sep-2022

Coresponding Author : Wahyu Indra Bayu
Author : Iyakrus, Arfa Desa Fitri, Wahyu Indra Bayu, Destriana, Soleh Solahuddin, Herri Yusfi, Id Paper : 34896

Dear Author(s),
On behalf of the 6TH INTERNATIONAL CONFERENCE ON SPORTS SCIENCE AND HEALTH

(ICSSH 2022) committee, we are pleased to inform that your paper with registration number 34896, entitled:
"**RELATIONSHIP BETWEEN PHYSICAL ACTIVITY AND DEPRESSION, ANXIETY, AND**

STRESS LEVELS OF HIGH SCHOOL STUDENTS"
has been **ACCEPTED** and will be procced to be published. Thank you for making The ICSSH 2022 for

your research interest.

We congratulate for your achievement. The technical issues about the publication will be informed later. Thank you very much for participating in our event.

Kindest Regards, Chairperson

Prisca Widiawati, M.Pd.

Lampiran 9 : Research Journal Acceptance

THE 5th SRIWIJAYA UNIVERSITY LEARNING AND EDUCATION INTERNATIONAL CONFERENCE 2022

FACULTY OF TEACHER TRAINING AND EDUCATION, SRIWIJAYA UNIVERSITY
Srijaya Negara St., Bukit Besar, Palembang, South Sumatra, Indonesia, 30139 Telephone/Fax: (0711) 580058, email: suleic@fkip.unsri.ac.id, web: sule-ic.fkip.unsri.ac.id

ABSTRACT ACCEPTANCE LETTER Number: 001/SULE5/FKIP/2022

Dear Eggi Pangestu, Hartati

We would like to thank you for your submission to The 5th Sriwijaya University Learning and Education International Conference (SULE-IC) 2022, which will be held on **October 5-6, 2022 online in Zoom**. The committee has completed the evaluation and we are happy to announce that your article abstract:

is ***ACCEPTED*** for oral presentation.

To secure a presentation slot, please submit your full paper no later than September 30, 2022 and make your payment at:

ID	OLG002
Title	*EVALUATION OF THE IMPLEMENTATION OF THE 2013 CURRICULUM REVIEWING FROM THE LEARNING ACHIEVEMENTS OF PHYSICAL EDUCATION IN SPORTS AND HEALTH*

Bank
Account Number Bank Code Account Holder Swift Code

: BNI
: 0070570115
: 009
: RPL 014 Unsri Penerimaan BLU : BNINIDJA

after finishing the transfer, please upload your proof of payment at https://bit.ly/sule_payment

And to submit your full paper no later than September 30, 2022 to our system:

https://bit.ly/sule2022_presenter

You may also download the paper template at out conference website:

http://www.sule-ic.fkip.unsri.ac.id/2022/

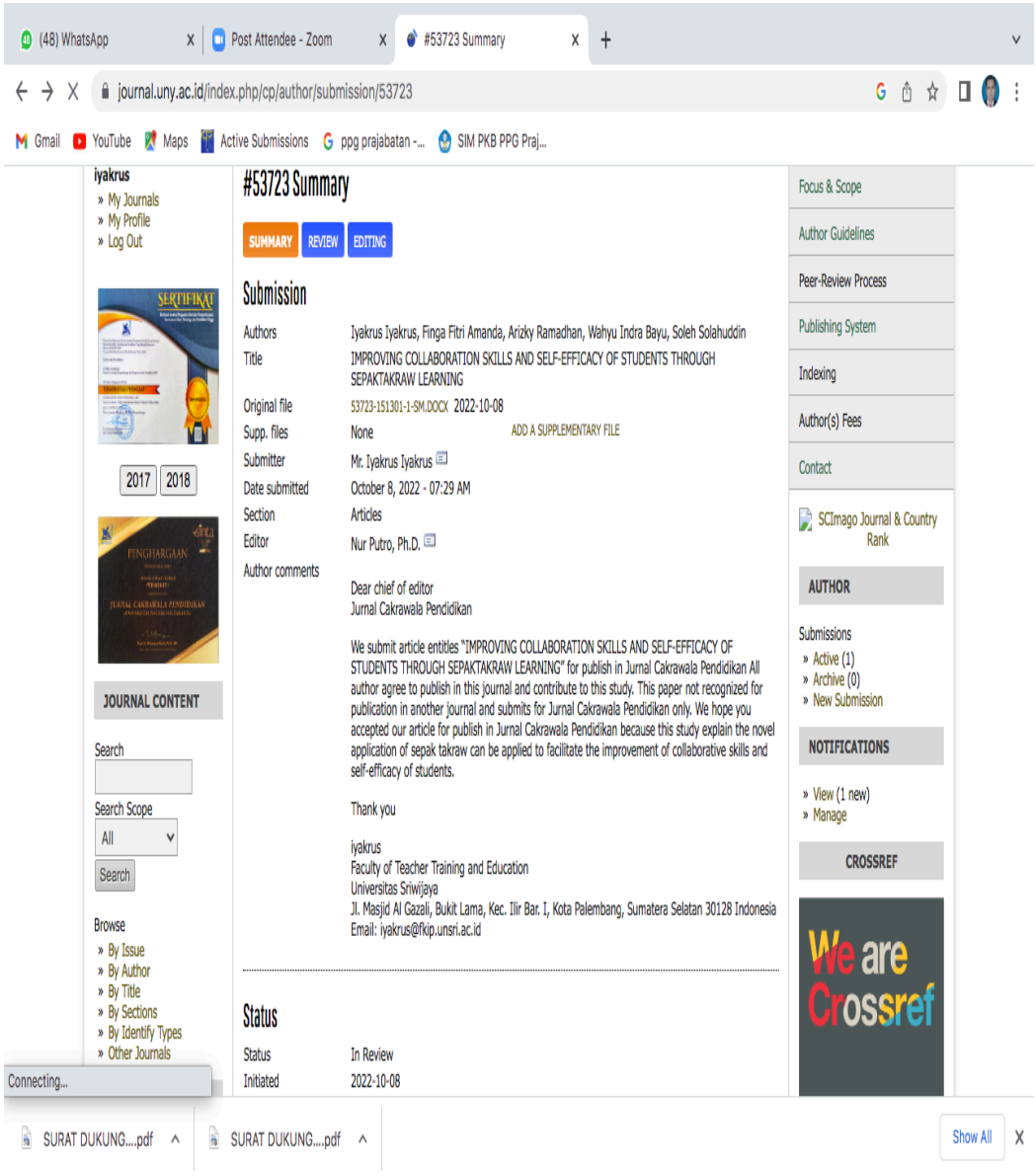
For more information, please email us at suleic@fkip.unsri.ac.id. You can also contact our committee through following numbers: Erlina : +6281368987603
Weni : +6281354633381

Jeri : +6285252778248
Looking forward to seeing you at the conference. Sincerely,

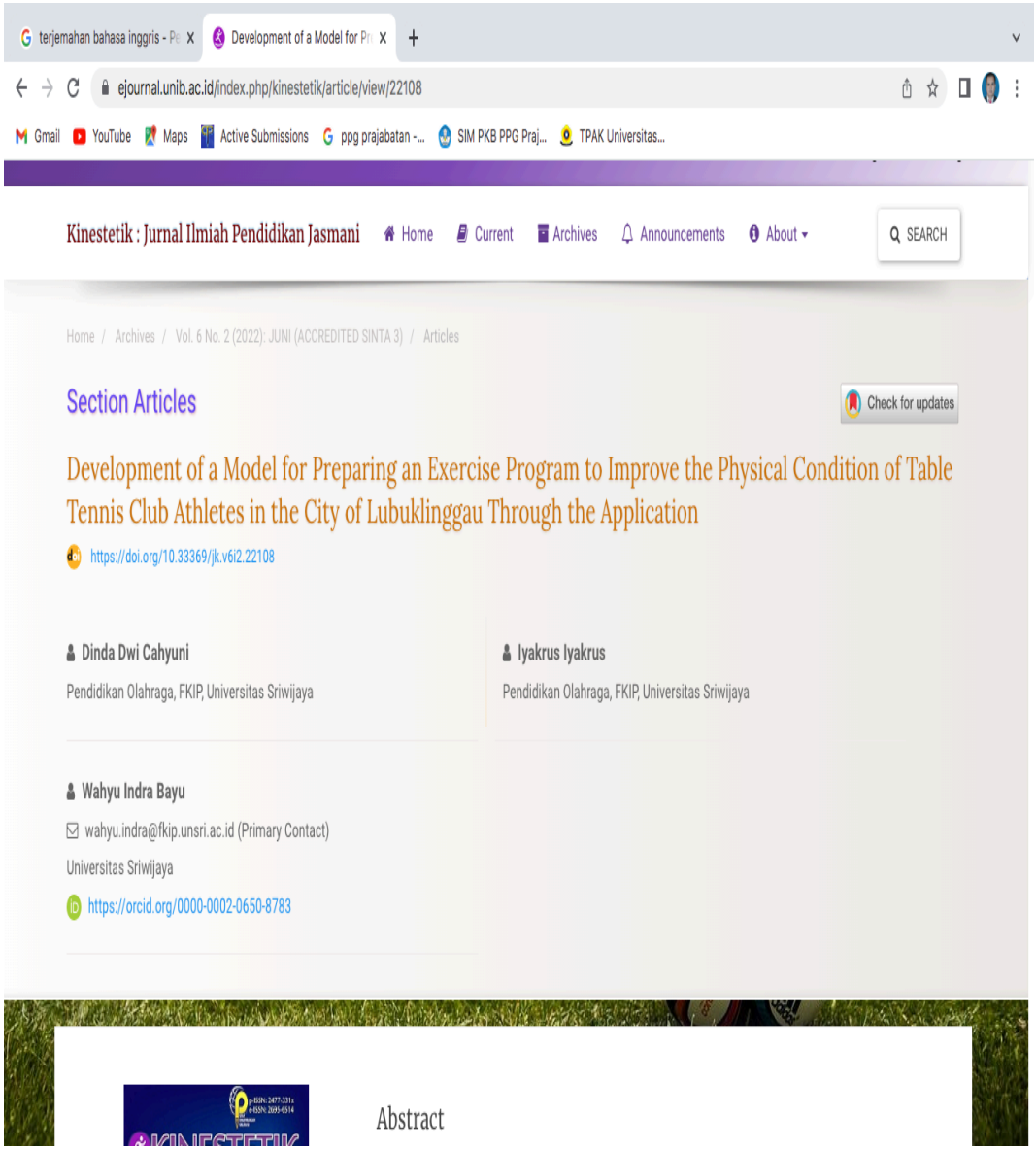
Ratu Ilma Indra Putri

Conference Chair

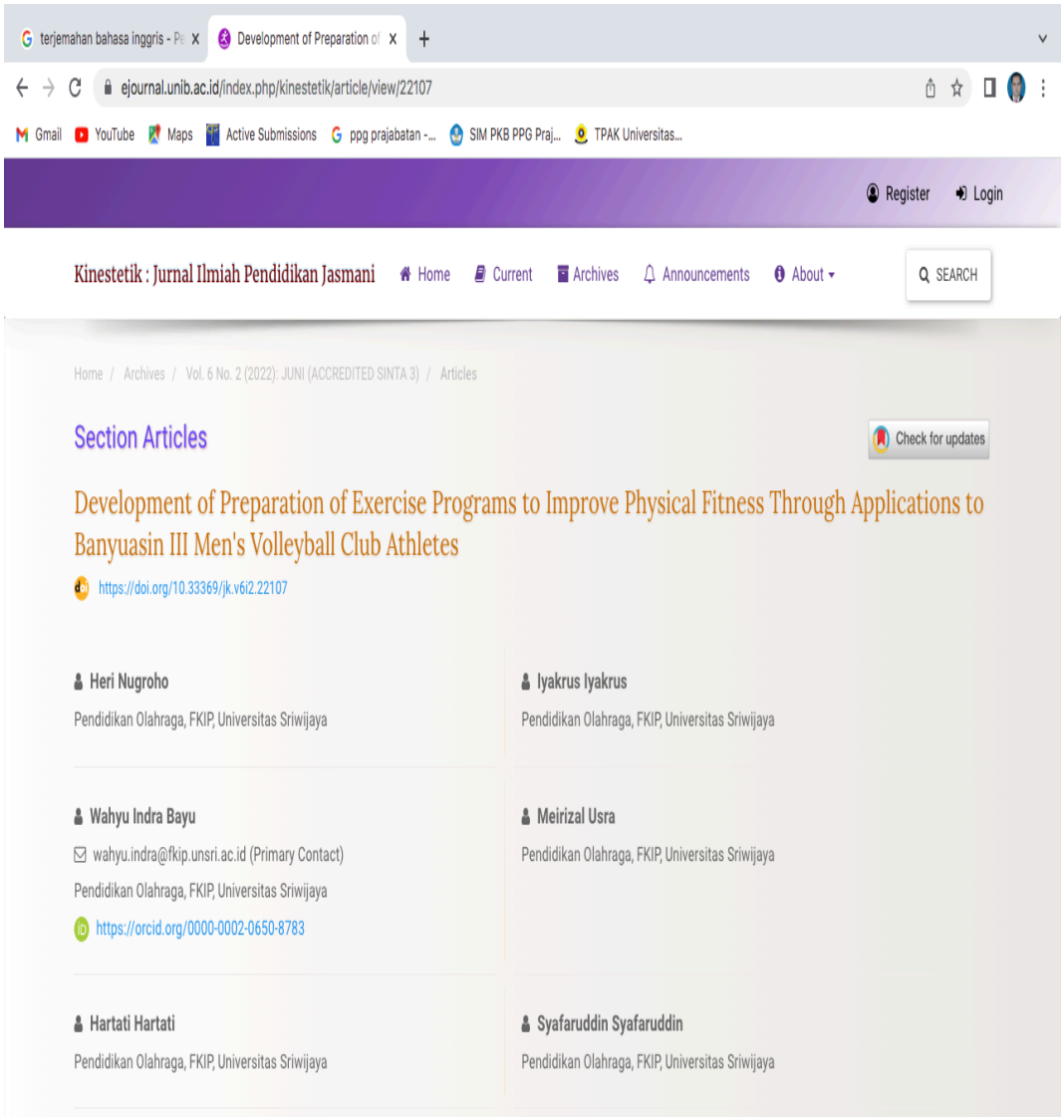
Lampiran 10 : Research Journal in Review Cakrawala Q3



Lampiran 11 : Journal of Student Thesis Publish (Sinta 3)



Lampiran 12 : Journal of Student Thesis Publish (Sinta 3)



Lampiran 13 : Loogbook Research

RESEARCH DAILY JOURNAL

(*LOG BOOK*)

1. Research Title : Profile Of Physical Fitness, Body Index And Academic Achievement Of Physical Education Teacher Candidates Sriwijaya University, Indonesia And Pangasinan State University Philippines.

2. Research team :
   Sriwijaya University
   Leader : Dr. Iyakrus, M.Kes. (Nidn 0012086205)
   Member : 1. Dr. Hartati, M.Kes. (Nidn 0010066002)
   2. Dr. Meirizal Usra M.Kes. (Nidn 0028056101)
   3. Dr. Wahyu Indra Bayu, M.Pd. (Nidn 0731018801)
   Faculty Of Teacher Training And Education Pengasinan State University
   1. Dr. Erwin O. Estrella
   2. Dr. Ramil L. Dacal, PhD.

3. Logbook Notes

NO	Time	Activity	Follow-up	Information
1	March – May 2022	Preparation of Research Proposals	Research team preparation. Preparation of research members	Head of Researcher
2	June 2022	Preparation for exploring research collaboration with the Faculty of Teacher Training and Education Pangasinan State University	Exploration of research collaboration with the Faculty of Teacher Training and Education Pangasinan State University	Head of Researcher
2	June 2022	Framework of research stages	Preparation of research stages. Identification of problems formulate a problem	Head of Researcher

			Formulate solutions by designing research.	
3	Juni 2022	1. Preparation of Research Design 2. Preparation of research instruments 3. Prepare students who are involved in research	Prepare design needs and students involved. 1. Preparation of research instrument variables. Body mass index (TMT) b. Physical component c. Academic achievement Determining the names of the S2 Sports Education students involved: 1. Dinda Dwi Cahyuni, S.Pd. 2. Heri Nugroho, S.Pd. 3. Romi Yudhisthira. 4. Eries Alpheba Hadinata	Head of Researcher

4	July 2022	1. Prepare a research sample of physical education study program students 2. Prepare research instruments 3. Preparation of initial data collection stages 4. Preparation for the preparation of the division of tasks for the research team	Determining students as the research sample. 101 students of Physical Education Study Program Research instrument data collection includes: 1. Body mass index (BMI) instrument 2. Physical fitness instrument 3. Academic achievement instrument Checking the research instruments includes: 1. Body mass index (BMI) instrument 2. Physical fitness instrument 3. Academic achievement instrument Duties of each research team: Chief Researcher Lead and coordinate the	Chief Researcher and research members

			team Member 1 Preparation of concepts, methods, and final reports Member 2 Literature review, literature study, and proposal checking Preparation of research instruments Members 3 and 4 a. Coordinating research samples b. Coordinate research tools and facilities c. Coordinating research samples	
5	July 2022	1. Initial research data preparation 2. Retrieval of final research data	Preliminary research data collection Retrieval of research data	1. Head and members of the Researcher 2. Research Member 3. Student members of the research
6.	August-September 2022	1. Preparation of research data analysis 2. Data correction	Perform analysis results	Head and members of the research

		3. data finalization		
7	October 2022	Preparation of research reports	Preparation of research reports	Head and members of the research
8	November 2022	1. Preparation of research results seminar 2. Completion of preparation of Research Reports	Research results seminar Final research reporting	Head and members of the research Head and members of the research
9	November 2022	Research Monev	Report revision	Head and members of the research

Palembang, November 2022

Research Team Leader,

Dr.Iyakrus, M.Kes.

Lampiran 14 : Research Articles

LEVEL OF PHYSICAL FITNESS, BODY MASS INDEX (BMI) AND ACADEMIC ACHIEVEMENT OF SRIWIJAYA UNIVERSITY PHYSICAL EDUCATION STUDENTS DURING THE COVID 19 PANDEMIC

Iyakrus, Hartati, Meirizal Usra, Wahyu Indra Bayu, Arizky Ramadhan
Physical Education Study Program Sriwijaya University
Palembang, Indonesia
Email: iyakrus@fkip.unsri.ac.id

ABSTRACT

This study is a descriptive study whose purpose is to determine the level of physical fitness, body mass index (BMI) and academic achievement of Sriwijaya University physical education students during the covid 19 period. The method used is a survey method with physical fitness test techniques, height and weight measurements to knowing body mass index and academic achievement assessment. The research sample consisted of 101 physical education students, Faculty of Teacher Training and Education, Sriwijaya University, aged 18 - 24 years. The data analysis technique used quantitative descriptive analysis. The results showed that the physical fitness component of students was 4.9% in the excellent category, 8.4% in the good category, 15.9% in the average category, 22.2% in the fair category, and 19.9 in the poor category. While the results of the body mass index component are 15.8% in the underweight category, 40.5% in the normal category, 35.6% in the overweight category, 7.9% in the obese 1 category and 0% in the obese 2 category. Then the results for the academic achievement component 80.1% in the excellenct category, 15.8% in the good category, 2.9% in the average category, 0.9 in fair category and 0% in poor category. It can be concluded that the physical fitness of physical education students during the covid 19 period was in the poor category, while the body mass index was in the normal category, then the student academic achievement index was in the excellenct category.

Keywords: Physical fitness, body mass index (BMI), academic achievement index.

Introduction

There have been many studies conducted on physical education learning during the COVID-19 period, both for students and for Univesity students, one of the studies conducted by Herlina & Suherman (2020) shows Physical Education learning has the potential to be developed in the midst of the COVID-19 pandemic

through a distance learning model with a collaborative approach. Suherman (2018) explained, through the fulfillment of good physical fitness the learning process of physical education has an effect on the prevention and spread of the covid-19 virus. The purpose of learning in Physical Education is to improve students' physical fitness (Iyakrus, 2018).

Physical fitness is associated with a substantial reduction in all-cause mortality, risk of heart disease, obesity, hyperlipidemia, hypercholesterolemia, hypertension, cerebrovascular disease, type 2 diabetes, metabolic syndrome and reduced reactivity to stress.

Having healthy habits is quite important to improve academic achievement and can be a capital to maintain a healthy lifestyle in the future, especially in countries with a significant increase in insedentarism and obesity. In this line, excessive fat percentage is associated with increased morbidity and mortality. Body mass index (BMI) is a basic and simple indicator for comparing an individual's body status with a standard population, but it should be noted that a person's BMI value can be related to different body fat percentages influenced by age, gender, ethnicity, or individual differences. In education, BMI is usually associated with academic outcomes in children and adolescents, showing a negative correlation (Syväoja et al., 2018). high BMI value can be a sign of an unhealthy lifestyle and increased internal stress in children which can affect their performance in school (Dumuid et al., 2017).

Body Mass Index (BMI) is determined by measuring weight and height, then the weight and height values are divided to get the body mass index value in kg/m2 . Body mass index is a parameter set by WHO (World Health Organization) as a ratio of body weight to the square of height. Body mass index values are related to health and disease risk as researchers have found recently. Body mass index also has a close relationship with diseases due to obesity or lack of energy in adolescent girls (Rini S, 2006), relationship between body mass index and depression (Leonore M de Wit et al, 2009).

Having good physical fitness will increase self-confidence thereby reducing symptoms of depression/anxiety (Franz & Feresu, 2013). Physical fitness is proven to improve brain function, cardiovascular function and physical performance (Guevara et al., 2015). There is a strong connection between mind and body that can aid learning (Mendoza & Clemente-Suárez, 2020). Students who have good physical fitness will help understand learning because of accelerated psychomotor development, increased cerebral blood flow, increased arousal, changes in hormone levels, changes in body shape, and increased self-esteem (Coe et al., 2006). Therefore, it is clear that good physical fitness can help improve student academic achievement. The term academic achievement is used to indicate an achievement obtained from student learning outcomes within a certain period of time in the form of understanding, application, analytical power, and evaluation which are expressed in the form of certain numbers or symbols through assessments carried out by lecturers using standardized tests (Muchlisin Riadi, 2021).

Research Methods

This research is a quantitative descriptive study with survey methods to determine aspects of physical fitness, Body Mass Index aspects and academic achievement aspects of Sriwijaya University physical education students. Aspects of physical fitness are measured through physical fitness test components including bleeb test for VO2 Max physical fitness, running speed test for speed physical fitness, sit and reach test for flexibility physical fitness, vertical jump test for leg muscle explosive power physical fitness, and push up test for arm muscle strength physical fitness. Meanwhile, aspects of body mass index (BMI) were measured by measuring height and weight. Then the aspect of the student's academic achievement index is seen from the accumulative student learning outcomes obtained. The sample is Sriwijaya University physical education students totaling 101 people. The data analysis technique used quantitative descriptive analysis.

Research Results

The results of this study consisted of physical fitness components, namely physical fitness VO2 Max, physical fitness running speed, physical fitness leg muscles flexibility, physical fitness leg muscles explosive power, physical fitness arm muscle strength, then Body Mass Index (BMI) and academic achievement components. Data on physical fitness results are shown in Table 1 below.

Table 1. Results of Physical Fitness VO2max.

No	Component	Category					Total
		Excellent	Good	Average	Fair	Poor	
1	VO2max	5	10	15	31	40	101
2	Percentage (%)	4.9	9.9	14.8	30.6	39.6	

In Table 1 for VO2max components, shows 5 student in the excellent category (4.9%), 10 students in the good category (9.9%), 15 students in the average category (14.8%), 31 students in the fair category (30.6) %), and 40 students in the poor category (39.6%).

Table 2. Results of Physical Fitness Running Speed

No	Component	Category					Total
		Excellent	Good	Average	Fair	Poor	
1	Running Speed	3	6	22	28	42	101
2	Percentage (%)	2,9	5.9	21.7	27.7	41.5	

In Table 2 Running Speed components, shows 3 students in the excellent category (2.9%), 6 students in the good category (5.9%), 22 students in the average category (21.7%), 28 students in the fair category (27.7) %), and 42 students in the poor category (41.5%).

Table 3. Results of Physical Fitness leg muscles Flexibility

No	Component	Category					Total
		Excellent	Good	Average	Fair	Poor	
1	Leg Muscles Flexibility	11	21	32	19	19	101

2	Percentage (%)	10.8	20.7	31.6	18.8	18.8	

In Table 3 Leg Muscles Flexibility, shows 11 students in the excellent category (10.8%), 21 students in the good category (20.7%), 32 students in the average category (31.6%), 19 students in the fair category (18.8) %), and 19 students in the poor category (18.8%).

Table 4. Results of Physical Fitness leg muscles Explosive power

No	Component	Category					Total
		Excellent	Good	Average	Fair	Poor	
1	Leg Muscles Explosive Power	8	16	23	35	19	101
2	Percentage (%)	7.9	15.8	20.7	34.6	18.8	

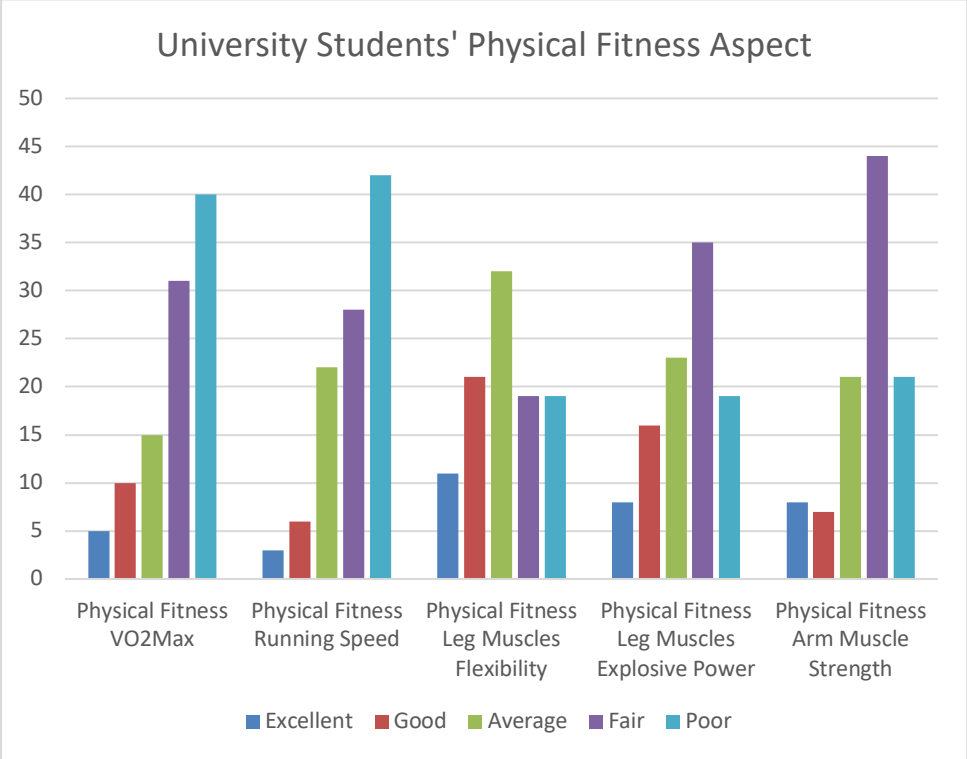
In Table 4 Leg Muscles Explosive Power, shows 8 students in the excellent category (7.9%), 16 students in the good category (15.8%), 23 students in the average category (20.7%), 35 students in the fair category (34.6) %), and 19 students in the poor category (18.8%).

Table 5. Results of Physical Fitness Arm Muscle Strength

No	Component	Category					Total
		Excellent	Good	Average	Fair	Poor	
1	VO2max	8	7	21	44	21	101
2	Percentage (%)	7.9	6.9	20.7	43.5	20.7	

In Table 5 Arm Muscle Strength, shows 8 students in the excellent category (7.9%), 7 students in the good category (6.9%), 21 students in the average category (20.7%), 44 students in the fair category (43.5) %), and 21 students in the poor category (20.7%).

Below is a graph of the average components of physical fitness VO2 Max, running speed, leg muscle flexibility, leg muscle explosive power, and arm muscle strength.



Graph 1: University Students' Physical Fitness Aspect

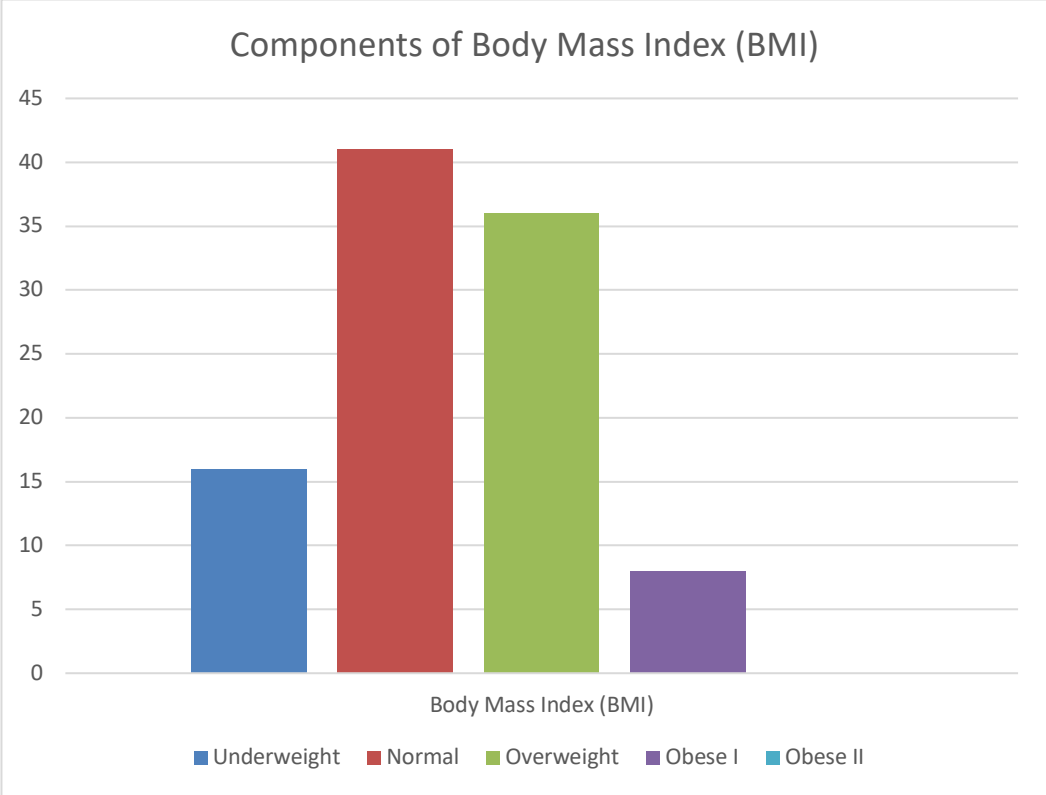
The following is the data on Bosy Mass Index (BMI) of University Students

Table 6. Data on Body Mass Index (BMI) of University Students.

No	Component	Category					Total
		Underweight	Normal	Overweight	Obese I	Obese II	
1	Body Mass Index (BMI)	16	41	36	8	0	101
2	Percentage (%)	15.8	40.5	35.6	7.9	-	

In Table 6 Body Mass Index (BMI), shows 16 students in the underweight category (15.8%), 41 students in the normal category (40.5%), 36 students in the overweight category (35.6%), 8 students in the obese I category (7.9) %), and 0 students in the obese II category (0%).

Below is a graph for Body Mass Index (BMI) components.



Graph 2: Components of Body Mass Index (BMI)

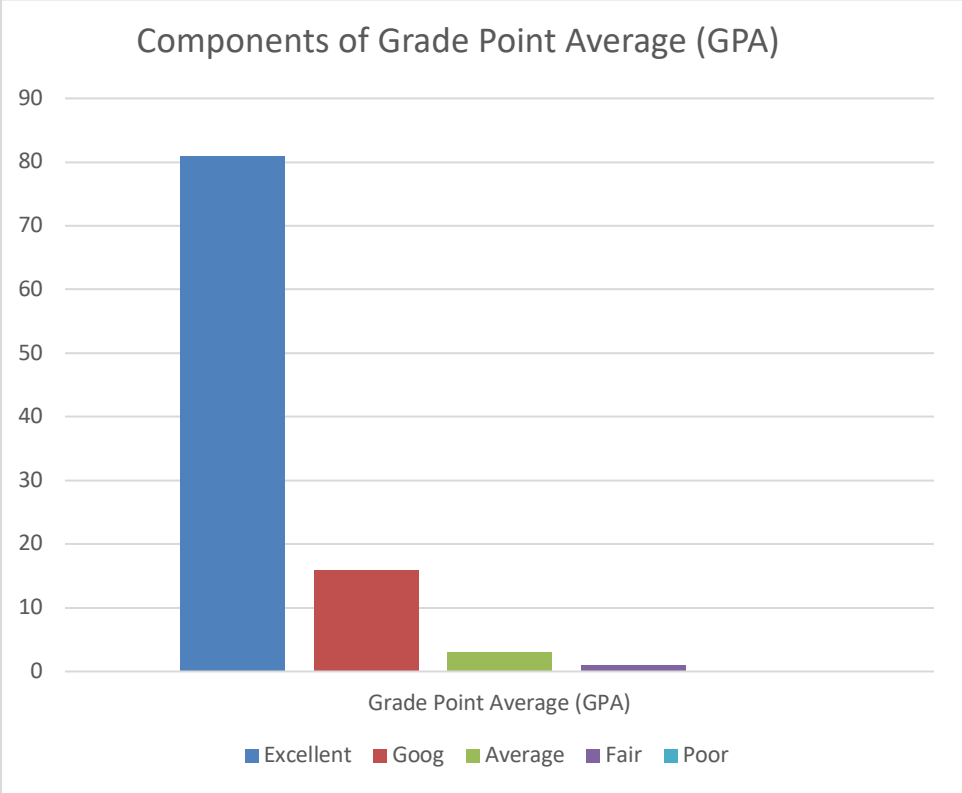
The following is results of University Student Grade Point Average (GPA).

Table 7. Results of University Student Grade Point Average (GPA)

No	Component	Category					Total
		Excellent	Good	Average	Fair	Poor	
1	Grade Point Average (GPA)	81	16	3	1	0	101
2	Percentage (%)	80.1	15.8	2.9	0.9	-	

In Table 6 Grade Point Average (GPA), shows 81 students in the excellent category (80.1%), 16 students in the good category (15.8%), 3 students in the average category (2.9%), 1 student in the fair category (0.9) %), and 0 students in the poor category (0%).

Below is a graph for Grade Point Average (GPA) components.



Graph 3: Components of Grade Point Average (GPA)

Discussion

Based on the results of research on the level of physical fitness of students in the physical education study program at Sriwijaya University, 7.9% was categorized as excellent, 6.9% was in good category, 20.7% was in average category, 43.5% was in fair category, and 20.7% was in fair category. There is a significant relationship between the level of obesity and physical fitness in college students. College students who have high obesity rates are associated with low physical fitness. Students who are obese have low levels of physical activity, causing low physical fitness. Physical fitness is very important for adolescents, because students with high physical fitness show less fatigue and high endurance (Samsudin et al., 2019). When these people started college, many of them experienced major lifestyle changes. Many people who were active and exercised in high school stopped doing so once they entered college. It becomes very difficult to stay healthy as students start to stay up late and sleep less in order to

have more time to do homework and study (Wittberg et al., 2009). Healthier students generally get sick less often, and don't miss class as often as their less healthy classmates.

The low physical fitness of students is associated with metabolic risk factors such as insulin resistance, obesity, and blood pressure. Physical fitness has a negative relationship with BMI and academic achievement (Alswat et al., 2017). There is a positive relationship between physical fitness and self-esteem. However, body mass index can be indirectly related to academic achievement for students who have improved academic performance by improving physical health and self-esteem (Baxter et al., 2013).

Improved academic performance due to increased exercise-related neurotransmitters, such as serotonin. Physical fitness by doing regular physical activity improves children's brain development and controls cognition and behavior (Dumuid et al., 2017). Proper regulation of the autonomic nervous system indicates a healthier state, better emotional control and self-confidence. Physical fitness and body mass index are the basis for developing stress control abilities, reducing anxiety states in times of high academic demands, and strengthening students' self-knowledge. (Baptista et al., 2012). Therefore, although body mass is not as reliable as physical fitness in predicting academic achievement, it can still be used effectively as a predictor of academic achievement, especially when combined with physical fitness variables (Iyakrus, Hartati, 2020).

Conclusions and Recommendations

Based on the results obtained, it can be concluded that the physical fitness of Sriwijaya University physical education students during the covid 19 period was in the poor category, while the body mass index was in the normal category, then the student academic achievement index was in the excellent category.

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