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Physical capacity survey of sports education student class 2022

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Abstract: Physical fitness factors include (speed, agility, flexibility, endurance, strength, balance). The researcher aims to determine the physical condition of students of the sports education study program class of 2022 at the STKIP PGRI Bangkalan campus. The sample obtained was 35 students from a sample of 28 male students and 7 female students. This study including the Sit & Reach to monitor lower back flexibility, Standing Stork Test to maintain a state of balance, Pess-up Test to assess upper body endurance, Illinois Agility Run Test to monitor speed and agility, Standing Long Jump Test to monitor leg strength. The results show that male and female students have lower back flexibility in the excellent category. Male and female students are balanced in the poor category. Male upper body endurance is average in the below average category and female is in the average category. Male speed and agility with average category and female speed and agility average category. Male leg strength with poor category and female with poor category. The conclusion of this research is that for physical capacity flexibility needs to be maintained, while balance, endurance, speed and agility, strength need to be improved.

Keywords: survey; physical capacity; sport education

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INTRODUCTION

Fitness bodily or physicalitself is condition general and abilities body someone, for operate activity physique a day day without feel too tired. Physical fitness is a requirement The main thing is to carry out activities well and effectively so that all body organs function optimally without feeling excessive fatigue (Dewi, Astra, & Suwiwa, 2020). A person's activities are very beneficial for health, this activity can also help somebody For healed from disease (Purwoto, Purwanto, & Liben, 2020). Meanwhile, a learning process through physical activity is part of improving physical fitness, developing motor skills, healthy living behavior, knowledge, activeness, sportsmanship and emotional intelligence (Anwar, Junaidi, & Kumbara, 2023).

Currently, basketball has developed a lot and is increasingly popular in modern life moment this , and even become one sport among the community. Even though basketball is a sport intended for players especially men, now basketball is also for players women , of various ages and even from everyone who has lack physique (Sitepu, 2018). Basketball, that is learning eye studyingboth in theory and practice given in universities, especially in science sport (Aris & Mu'arifuddin, 2020).

Basketball isThis is a very interesting sports game to be played by both men and women as well as children, and of all ages. Where there are many benefits both physically, mentally and socially. By Physicality in basketball includes strength, speed, agility, endurance, and flexibility. Because of ppeed and agility arefactors themain physical requirements required by the players (Arwih, 2019). Apart from that, there are also psychological benefits from playing basketball which are increasingly felt by players itself by playing basketball will practice concentration , endurance emotions so that social skills work together well (Hita, et al., 2023).

Player must have the motor efficiency to master the game of basketball, then of theIt requires strong physical skills such as *strength, power*, *speed*, *flexibility*, etc(Daharis & Rahmadani, 2018). Basketball is a sport that requires high skill and physical fitness of athletes, player speed is also very necessary because basketball is a sport that is required activeness , as well as high strength (Suryadi, Saputra, & Wahyudi, 2022). And it can be said that basketball is a very complete sport , where Many of the elements in it imply aspects of fitness and endurance different body (Hidayatullah, 2018). Several aspects included in

physical fitness include balance strength, endurance, speed and agility, flexibility, coordination and reaction speed (Hasanah, Hidayatullah, Handayani, & Purwoto, 2022).

Component The physical requirements required in basketball include: biomotor , speed, agility, dexterity, strength, coordination. In the sport of basketball, of course, physical requirements are required so that tactical techniques can be carried out well, well and optimally. Basketball is a sport that requires a combination of physical components and technical elements. The physical elements in basketball include coordination, speed, flexibility, accuracy, agility, strength, endurance and physical fitness. The technical components are the ability to dribble, pass, shoot and rebound . Therefore, to develop good basketball athletes, the training process requires an optimal combination of physical and technical elements (Endrisman & Jatra, 2023).

Good body condition is one of the important prerequisites for athletes, therefore physical condition must be developed and improved in accordance with the nature, characteristics and needs of each sport (Prima & Kartiko, 2021). Physical fitness is a physical quality, psychological quality, and functional ability of a person's body equipment to achieve optimal performance in certain sports (Aryatama, 2021).

Physical condition tests are essentially very varied from one sport to another, because each sport has different characteristics depending on the requirements that must be met. Skills and abilities for carry out activity or work, improve Power Work with without feeling offended excessive fatigue. Therefore, based on the results of physical performance tests, a complete picture of the athlete's general condition can be obtained (Amelia, 2022). Tests and measurements this can also be done develop method practice and also determination reject measuring in coaching sport. Tests are methods or procedures that can be used and taken in the context of assessment and measurement in the field of education. As an educator, you must master the student assessment system . A good test must have the following conditions ; must be efficient, must be standard, have norms, be objective, valid, reliable. Therefore , to get a good test, it must be tested first and the results analyzed so that it meets the requirements above (Kadir, 2015).

The results of previous research showed that the physical capacity of soccer players stated that the endurance test results were in the "medium" category, agility "good", speed "medium", strength "medium"(Setiawan, 2013). Apart from that, previous research also found that the physical fitness survey of PJKR students was in the moderate category with a

percentage of 39.1% (Bachtiar, Aulia, & Nuraeni, 2022). Based on previous research, physical capacity surveys are very important. Physical capacity measurements on STKIP PGRI Bangkalan sports students have never been carried out, so the novelty in this research is measuring the physical capacity of STKIP PGRI Bangkalan students.

Therefore, researchers can update by measuring different physical instruments on study program students, especially sports education class of 2022 at the STKIP PGRI Bangka campus. The tests measured include several aspects (agility, flexibility, lower leg muscle explosive power, arm muscle explosive power, balance). The importance of this research is to measure appropriate physical conditions by mapping physical capacity. This research aims to measure the physical condition of the 2022 sports education study program students at the STKIP PGRI Bangkalan campus. By understanding the physical test, it is hoped that it can provide more concrete guidance in several aspects of the physical test for each student.

MATERIAL AND METHODS

This study used method survey. Quantitative research is a scientific research method that collects and analyzes data in the form of numbers or quantitative data to answer research questions and test hypotheses. The research population and sample were selected using the *purposive sampling method.* Sample selection was carried out using *purposive sampling,* which is a method where samples are chosen deliberately based on certain considerations and observational objectives (Ani, Lumanauw, & Tampenawa, 2021). Samples will be used as many as 35 students of 28 students sample man men and 7 students sample STKIP PGRI Bangkalan women. This research used a single variable , namely (agility, flexibility , lower leg muscle explosive power, arm muscle explosive power, balance). This research is different from previous research because the sample used was specifically for students taking basketball courses, so the capacity measured was that which supports the sport of basketball.

Study This is modification from the book 101 *Performance Evaluation Tests* by Brian Mackenzie (Mackenzie, 2005) includes Sit & Reach, Standing Stork Test, Pess-up Test, Illinois Agility Run, Standing Long Jump Test. Test implementation and tools used carrying out physical tests from attitude beginning until attitude end existing implementation carried out by experts. To perform the Sit & Reach test, start by sitting on the floor with your shoes off, your feet flat against the measuring table, and your legs straight. Reach forward as far as possible, sliding your fingers along the table. The score is the distance from your fingertips to

the edge of the table. The Sit & Reach table begins at 15 cm; thus, reaching 10 cm beyond your toes equals a score of 25 cm. It's important to perform a few warm-up attempts before recording your best score. To perform the Standing Stork Test, begin by standing comfortably on both feet with your hands on your hips. Raise one leg and place the toe of that foot on the knee of your standing leg. At the assistant's signal, lift your heel to stand on your toes, and the assistant will start the stopwatch. Maintain your balance for as long as possible without letting your heel touch the ground or your raised foot move away from your knee. The assistant will record the time you can hold the balance. Then, repeat the test with the other leg. To perform the press-up exercise, start by lying on a mat with your hands shoulder-width apart and your arms fully extended.

Lower your body until your elbows form a 90-degree angle, then push back up to the starting position with arms fully extended. Do not have your feet held by anyone. Perform the push-ups continuously without pausing. Count and record the total number of full press-ups you can complete. To perform the Illinois Agility Run, start by lying face down on the ground at the starting point. Upon the assistant's command, quickly stand up and navigate through the cone-marked course to the finish line. The assistant will record the total time taken from their command to the completion of the course. To perform a standing long jump test, the athlete should stand with their feet at the edge of the sandbox. The athlete then squats, leans forward, swings their arms back, and jumps horizontally as far as possible, landing with both feet in the sandpit. The trainer measures the distance from the edge of the sandpit to the nearest point of contact made by the athlete. The jump should begin from a stationary position.

The researcher's data analysis technique uses descriptive analysis where the method used later to describe or analyze research results uses numbers, data collection, interpretation, and appearance of the results. Testing data on test results for 5 physical components including (agility, flexibility, lower leg muscle explosive power, arm muscle explosive power, balance).

RESULTS

Below the results of the physical capacity of students divided into male and female students will be shown as follows:

Tabel 1 Percentage Male Lower Back Flexibility

Norms	Achievement	Frequency	Percentage
Excellent	> 14 cm	27	96%
Above Average	11-14 cm	0	0%
Average	7-10 cm	0	0%
Below Average	4-6 cm	0	0%
Poor	< 4 cm	1	4%

Based on the test results in table 1, it was found that 27 students lower back flexibility data of more than 14 cm, therefore they were included in the excellent category with a percentage of 96% and 1 student less than 4 cm was included in the poor category with a percentage of 4%.

Tabel 2 Percentage Female Lower Back Flexibility

Norms	Achievement	Frequency	Percentage
Excellent	> 15 cm	7	100%
Above Average	12-15 cm	0	0%
Average	7-11 cm	0	0%
Below Average	4-6 cm	0	0%
Poor	< 4 cm	0	0%

Based on the results in table 2, it was found that the lower back flexibility data for 7 students was more than 15cm. Therefore, it is included in the excellent category with a percentage of 100%.

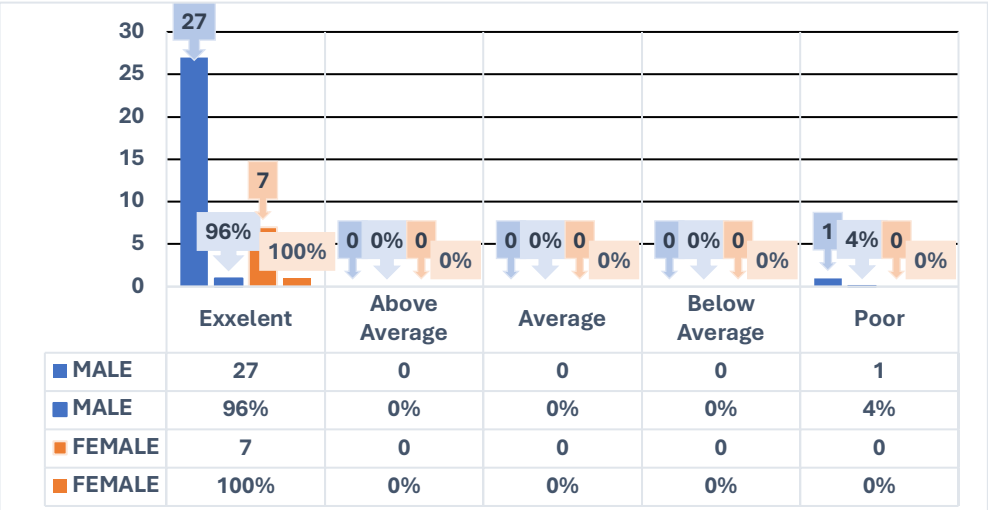

Figure 1 Diagram Lower Back Flexibility

Tabel 3 Percentage Balance Male

Norms	Achievement	Frequency	Percentage
Excellent	> 50 sec	1	4%
Above Average	50-41 sec	0	0%
Average	40-31 sec	0	0%
Below Average	30-20 sec	6	21%
Poor	< 20 sec	21	75%

Based on the test results in table 3, the balance male percentage shows that 1 student is more than 50 seconds, therefore it is included in the excellent category with a percentage of 4%, 6 students between 30-20 seconds are included in the below average category with a percentage of 21% and 21 students are less than 20 sec is included in the poor category with a percentage of 75%.

Tabel 4 Percentage Balance Female

Norms	Achievement	Frequency	Percentage
Excellent	> 30 sec	0	100%
Above Average	30-23 sec	0	0%
Average	22-16 sec	0	0%
Below Average	15-10 sec	2	21%
Poor	< 10 sec	5	75%

Based on the test results in Table 4 Percentage of Balance Female, data shows that 2 students 15-20sec are included in the below average category with a percentage of 21% and 5 students are included in the poor category with a percentage of 75%.

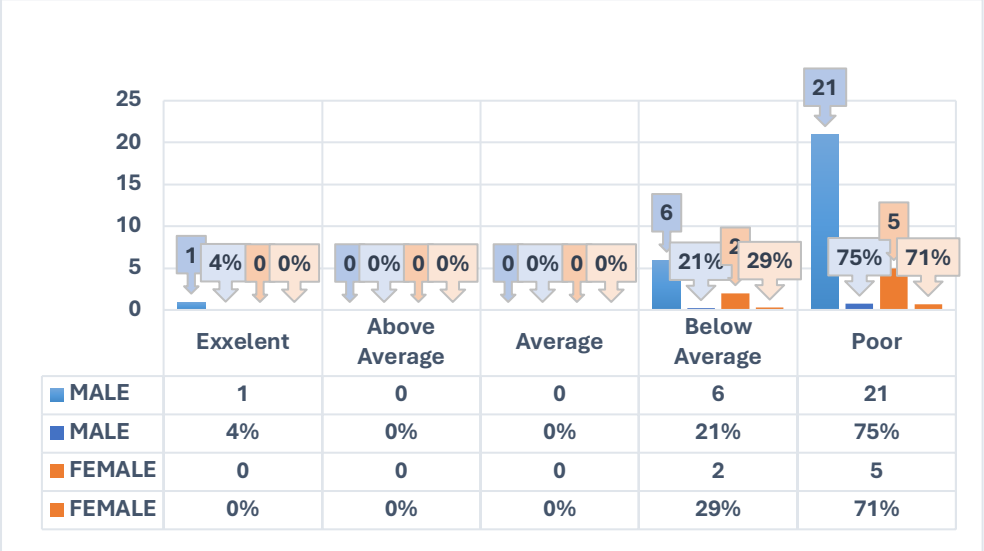

Figure 2 Diagram Balance

Tabel 5 Percentage Upper Body Endurance Male

Norms	Achievement	Frequency	Percentage
Excellent	> 54	0	0%
Above Average	45-54	1	4%
Average	35-44	4	14%
Below Average	20-34	19	68%
Poor	< 20	4	14%

Based on the test results in table 5 upper body endurance male, the data shows that 1 student with a score of 45-54 is in the above average category with a percentage of 4%, 4

students between 35-44 are in the average category with a percentage of 14%, 19 students between 20-34 are in the category below average with a percentage of 68% and 4 students less than 20 are included in the poor category with a percentage of 14%.

Tabel 6 Percentage Upper Body Endurance Female

Norms	Achievement	Frequency	Percentage
Excellent	> 48	0	0%
Above Average	34-48	2	29%
Average	17-33	4	57%
Below Average	6-16	1	14%
Poor	< 6	0	0%

Based on the test results in table 6 percentage of upper body endurance female, the data shows that 2 students with a score of 34-48 are in the above average category with a percentage of 29%, 4 students between 17-33 are in the average category with a percentage of 57%, and 1 student is between 3-16. included in the below average category with a percentage of 14%.

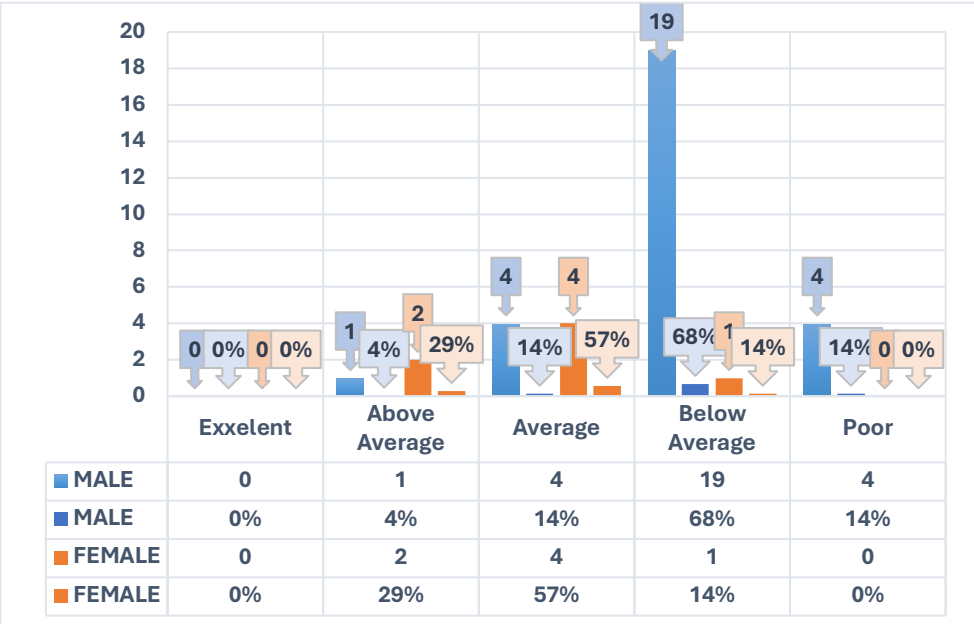

Figure 3 Diagram Upper Body Endurance

Tabel 7 Percentage Speed and Agility Male

Norms	Achievement	Frequency	Percentage
Excellent	<15.2 sec	0	0%
Above Average	15.2-16.1 sec	3	11%
Average	16.2-18.1 sec	13	46%
Below Average	18.2-18.3 sec	2	7%
Poor	>18.3 sec	10	36%

Based on the test results in table 7, the percentage of male speed and agility shows that 3 students with a score of 15.2-16.1 are included in the above average category with a percentage of 11%, 13 students between 16.2-18.1sec are included in the average category with a percentage of 46%, 2 students are between 18.2-18.3 sec including below average category with a percentage of 36% and 10 students with less than 18.3 sec are included in the poor category with a percentage of 36%.

Tabel 8 Percentage Speed and Agility Female

Norms	Achievement	Frequency	Percentage
Excellent	<15.2 sec	0	0%
Above Average	17.0-17.9 sec	0	0%
Average	18.0-21.7 sec	4	57%
Below Average	21.8-23.0 sec	2	29%
Poor	>23 sec	1	14%

Based on the test results in table 8 female speed and agility percentage data was obtained for 4 students, namely 18.0-21.7 sec, including the average category with a percentage of 57%, 2 students between 21.8-23.0 sec including the below average category with a percentage of 29%, and 1 less than 23 sec including poor category with a percentage of 14%.

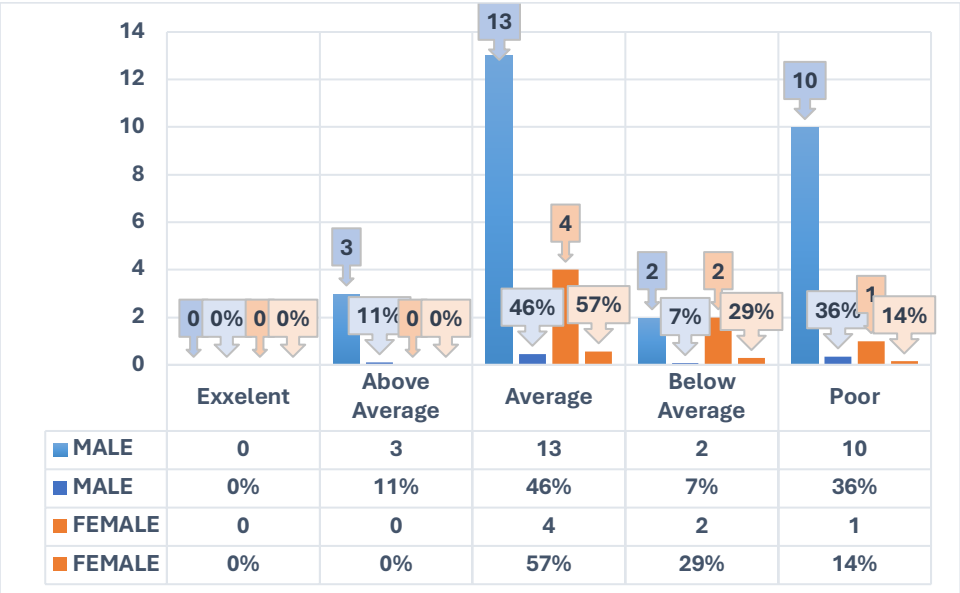

Figure 4 Diagram Agility

Tabel 9 Percentage Leg Strength Male

Norms	Achievement	Frequency	Percentage
Excellent	> 3.0 m	0	0%

Above Average	2.7 m	1	4%
Average	2.5 m	2	7%
Below Average	2.3 m	12	43%
Poor	< 2 m	13	46%

Based on the test results in table 9, the percentage of male leg strength, the data obtained for 1 student was 2.7m, including the above average category with a percentage of 4%, 2 students among 2.5m including the average category with a percentage of 7%, 1 2 students among 2.3m including the below average category with the percentage is 43% and 13 students with less than 2 million are included in the poor category with a percentage of 46%.

Tabel 10 Percentage Leg Strength Female

Norms	Achievement	Frequency	Percentage
Excellent	> 2.8 m	0	0%
Above Average	2.5 m	0	0%
Average	2.2 m	0	0%
Below Average	1.9 m	2	29%
Poor	1.7 m	5	71%

Based on the test results in table 10, percentage of female leg strength, data shows that 2 students with a score of 1.9 m are in the below average category with a percentage of 29%, and 5 students are in the poor category with a percentage of 71%.

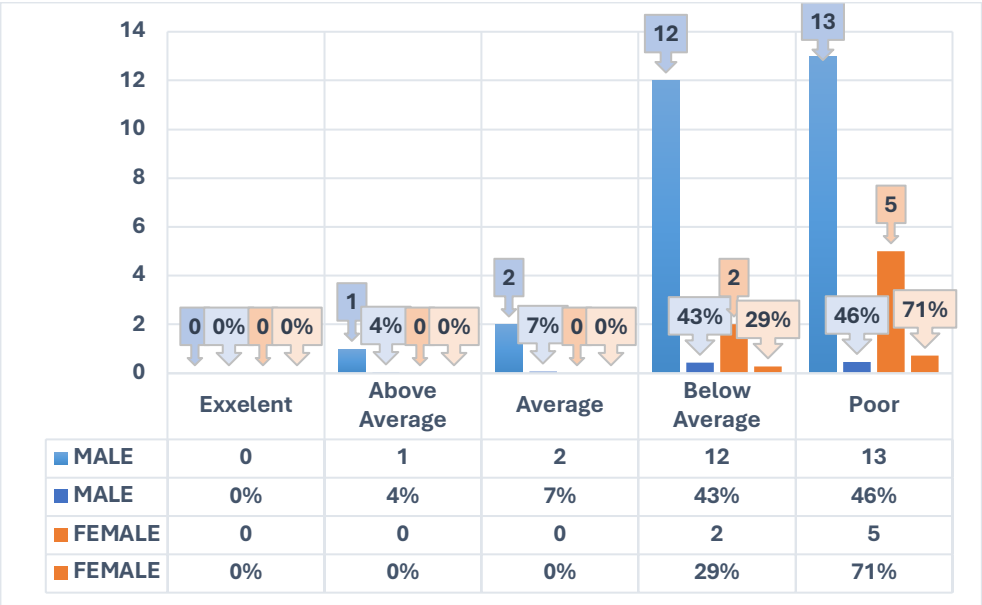

Figure 4 Diagram Leg Strength

DISCUSSION

Based on the results, it shows that male and female students have lower back flexibility in the excellent category. Male and female students are balanced in the poor category. Male upper body endurance is average in the below average category and female is in the average category. Male speed and agility with average category and female speed and agility average category. Male leg strength with poor category and female with poor category. The physical capacity in this research can be used as good evaluation material. The results of this research are supported by previous research that the physical capacity of soccer players stated that the endurance test results were in the "medium" category, agility "good", speed "medium", strength "medium" (Setiawan, 2013). Physical condition has a very important role for sports students and not only athletes (Musdalifah & Arnando, 2023). Physical condition both capable of providing good performance (Rachmalia et al., 2022). Sports students must have good physical condition to support their study activities (Wicaksana & Wahyudi, 2021). Physical capacity components must be maintained and trained so that they are always in good condition (Abi et al., 2022).

Male and female of lower back flexibility in the excellent category. The results of this research show that its flexibility is in the excellent category. This shows that student flexibility is in good condition. Flexibility is a person's ability to expand body movements without experiencing injury (Musdalifah & Arnando, 2023). Someone who has high flexibility is not easily injured and is able to increase and support other physical capacities such as endurance, agility and power (Rizkiyati & Ismalasari, 2024).

Male and female students are balanced in the poor category. Balance is a physical condition where a human being can perform a movement stably without any additional movements such as falling or loss of stability (Musdalifah & Arnando, 2023). Balance is also very necessary so that athletes have a good level of stability when moving both slowly and quickly. Of course, sports students also need good balance (Rizkiyati & Ismalasari, 2024). The key difference between this research and previous studies is the sample used. This research measures the physical capacity of students enrolled in basketball courses, ensuring that the physical attributes assessed are those most relevant to basketball.

Male upper body endurance is average in the below average category and female is in the average category. Endurance abilities are very necessary for an athlete and sports students are no exception (Jatmiko et al., 2024). This is so that you can carry out activities for

a long duration without experiencing excessive fatigue. Endurance is also able to accelerate the body's metabolism very quickly and can maintain tissue in every blood circulation (Rizkiyati & Ismalasari, 2024).

Male speed and agility with average category and female speed and agility average category. Speed is a person's ability to carry out a movement in the shortest possible time (Rachmalia et al., 2022). A running movement that changes direction very quickly is a term for agility (Rizkiyati & Ismalasari, 2024). Students also need good physical capacity in the speed and agility components.

Sports students must have good strength. Strength in general is very important for most sports, strength can also support other physical conditions (Wahyono et al., 2024). Male leg strength with poor category and female with poor category (Rizkiyati & Ismalasari, 2024; Rohman Hakim et al., 2022).

Based on the explanation above, sports students need good physical capacity to support their studies (Sunanto et al., 2022). If there is a lack of physical capacity, training methods are needed to increase it (Purwoto et al., 2020).

CONCLUSION

The conclusion of this research is that the physical capacity of STKIP PGRI Bangkalan students is in the male lower back flexibility excellent category with a percentage of 96%, poor category with a percentage of 4%. Female Lower Back Flexibility excellent category with a percentage of 100%. Male balance excellent category with a percentage of 4%, below average category with a percentage of 21%, poor category with a percentage of 75%. Female balance below average category with a percentage of 21%, poor category with a percentage of 75%. Male upper body endurance above average category with a percentage of 4%, average category with a percentage of 14%, category below average with a percentage of 68% poor category with a percentage of 14%. Female upper body endurance above average category with a percentage of 29%, average category with a percentage of 57%, below average category with a percentage of 14%. Male speed and agility above average category with a percentage of 11%, average category with a percentage of 46%, below average category with a percentage of 36% and poor category with a percentage of 36%. Female speed and agility average category with a percentage of 57 below average category with a percentage of 29%,

poor category with a percentage of 14%. Male leg strength above average category with a percentage of 4%, average category with a percentage of 7%, below average category with the percentage is 43% and poor category with a percentage of 46%. Female leg strength below average category with a percentage of 29%, and poor category with a percentage of 71%.

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