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Physical Fitness and Self Efficacy in PATHFIT 1 of Education Students

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Abstract. Self-efficacy is an individual's belief in their ability to perform and accomplish tasks. On the other hand, physical fitness encompasses an individual's comprehensive state of bodily health and well-being. It pertains to the capacity to engage in physical activities effortlessly, efficiently, and without undue exhaustion or strain. The study aimed to determine the level of Physical Fitness and Self-Efficacy in PATHFIT 1 of Education students when grouped according to sex, year level and major field of specialization. This study used a descriptive and correlational research. The respondents were the 234 students using stratified random sampling. A standardized questionnaire used in this study for self- efficacy was taken from the general self-efficacy scale. The physical fitness questionnaire was researcher made and undergone a validation process. The salient results of the study were as follows: the level of physical fitness and self- efficacy were moderate; physical fitness significantly influenced the self-efficacy of Education students; there is no significant difference in the level of physical fitness of education students when grouped according to sex, year level and major field of specialization; and there is no significant difference in the level of self-efficacy of education students when grouped according to sex, year level and major subject. An enhancement program was formulated to better the importance of developing physical fitness and self-efficacy among students to monitor progress and changes.

Keywords. *Physical Fitness, Self-Efficacy, Descriptive, Enhancement program, Philippines*

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1. Introduction

Self-efficacy refers to an individual's belief in their ability to perform and accomplish tasks. It encompasses their confidence in managing their behaviour, influencing their environment, and staying motivated while pursuing their objectives. Additionally, self-efficacy aids in motivating individuals and enables them to acquire knowledge during the learning process. Study argue that cultivating a strong sense of self-efficacy holds significant importance across various aspects of life [21]. Given life's challenges, a high level of self-efficacy can enhance one's ability to effectively cope with difficulties. Albert Bandura's social cognitive theory places self-efficacy at its core, emphasizing the role of observational learning, social experiences, and reciprocal determinism in the development of personality [13].

Physical fitness encompasses an individual's comprehensive state of bodily health and well-being. It pertains to the capacity to engage in physical activities effortlessly, efficiently, and without undue exhaustion or strain. Attaining physical fitness necessitates a holistic approach involving regular exercise, proper nutrition, sufficient rest, and a balanced lifestyle. As highlighted, physical fitness offers a multitude of advantages. It enhances overall health, mitigates the risk of chronic ailments, elevates energy levels, promotes mental well-being, and fosters longevity [23]. Furthermore, physical fitness enhances performance in daily activities, sports, and other physical pursuits. As elucidated in the study, physical fitness is a dynamic and ongoing process that demands unwavering commitment, steadfast dedication, and the sustained adherence to a healthy lifestyle [4]. Regular exercise serves as a cornerstone for elevating and sustaining levels of physical fitness.

According to a recent study, the overall physical activity status of the Philippines received a low grade of F. In contrast, countries like Finland and Slovenia scored higher grades like A-, attributed to various initiatives implemented to promote physical activity among children. The grading system evaluated factors such as overall physical activity organized sports, active play, active transportation, sedentary behaviour, and physical fitness. Moreover, a study focusing on Philippine National Athletes demonstrated that self-efficacy and mental toughness have gained recognition in the field of sports psychology. These psychological factors play a crucial role in assisting athletes to confront and overcome adversities and challenges in their lives [14].

One prominent gap lies in the utilization of diverse measurement tools to assess physical fitness and self-efficacy, resulting in inconsistencies and challenges when comparing findings across studies. Moreover, most of the reviewed studies have primarily focused on the general population, thereby overlooking specific groups, including older adults, individuals with chronic conditions, and marginalized communities [18].

The purpose of this study was to investigate the level of physical fitness and self-efficacy of Education students when grouped according to sex, year level and major field of specialization. This study investigated the relationship between physical fitness and self-efficacy among Education students. Also, the difference on the level of physical fitness and self-efficacy of Education students were compared according to their sex, year level, and major field of specialization. Additionally, the study aimed to develop an enhancement program that would improve both physical fitness and self-efficacy levels among these students.

2. Methodology

The researcher utilized descriptive, comparative, and correlational research design to determine the level of physical fitness of students in relation to self-efficacy. In this study, comparative research was employed to examine the differences in the levels of physical fitness

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and self-efficacy among Education students participating in the PathFit 1 program in higher education. Also, correlational research was used to identify and measure the relationship between the level of physical fitness and self-efficacy among Education students enrolled in the PathFit 1 program. It was conducted in one of the Higher Education Institutions in Negros Occidental. The respondents were the First year and Second year Education students in one of the Public Higher Education Institution in Negros Occidental. The instrument used to gather data for physical fitness was a standardized International Fitness Scale and the self-efficacy was General Self-Efficacy Scale from the World Health Organization.

3. Results and Discussion

Table 1. ***Level of Physical Fitness of Education students when Taken Collectively***

Dimension	mean	sd	Verbal interpretation
Cardiorespiratory Fitness	3.767	0.639	Moderate
Muscular Strength	3.301	0.750	Moderate
Speed and Agility	3.164	0.826	Moderate
Flexibility	3.821	0.747	Moderate
As a whole	3.479	0.632	Moderate

Table 1 provides an overview of the respondents' physical fitness levels across various dimensions. In terms of Cardiorespiratory Fitness, the data falls within the "moderate" interpretation. Similarly, for Muscle Strength indicates a "moderate" level. The results for Speed Agility show a "moderate" range. Furthermore, the data on Flexibility is interpreted as "moderate". Overall, when considering all types and indicators of physical fitness collectively, the results demonstrate a "moderate" interpretation. These findings provide insight into the general physical fitness levels of the respondents, highlighting their performance across different dimensions of physical fitness.

Table 2. ***Physical Fitness of Education students in terms of Sex***

Area	Sex	Mean	Std. Deviation
Cardiorespiratory Fitness	Female	3.764	0.657
Cardiorespiratory Fitness	Male	3.774	0.599
Muscular Strength	Female	3.326	0.743
Muscular Strength	Male	3.243	0.768
Speed and Agility	Female	3.112	0.829
Speed and Agility	Male	3.286	0.809
Flexibility	Female	3.870	0.734
Flexibility	Male	3.704	0.768
As a whole		3.479	0.6315

The results presented in Table 2 shows an overview of physical fitness scores categorized by gender. Research indicates that there are distinct gender differences in various aspects of physical fitness. Males, on average, tend to have higher levels of cardiorespiratory fitness, muscular strength, and power, particularly in the upper body [15].

In contrast, females generally exhibit greater flexibility, particularly in terms of joint range of motion [6]. These findings highlight the general trends observed in studies examining gender differences in physical fitness. However, it is important to recognize that individual

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variations and factors such as training, physical activity levels, and socio-cultural influences can also impact these differences.

Table 3. ***Physical Fitness of Education students in terms of Year Level***

Area	Year Level	Mean	Std. Deviation
Cardiorespiratory Fitness	1st year	3.718	0.651
Cardiorespiratory Fitness	2nd year	3.808	0.629
Muscular Strength	1st year	3.243	0.740
Muscular Strength	2nd year	3.349	0.756
Speed and Agility	1st year	3.030	0.788
Speed and Agility	2nd year	3.275	0.843
Flexibility	1st year	3.651	0.755
Flexibility	2nd year	3.961	0.713
As a whole		3.471	0.6255

Table 3 provides an examination of physical fitness scores based on the year level of the respondents. There is a no substantial literature to support the difference of Physical fitness between year levels in Higher Education institutions. However, it is noteworthy to mention that age can significantly impact physical fitness. As individuals age, various physiological changes occur that can affect physical performance and fitness levels [25]. Aging affects physical fitness through declines in cardiorespiratory fitness, muscle strength and power, joint flexibility, and balance and coordination. These changes can lead to reduced oxygen uptake, decreased muscle mass and strength, limited range of motion, and an increased risk of falls [22].

Table 4. ***Physical Fitness of Education students in terms of Major Field of Specialization***

Area	Major Field of Specialization	Mean	Std. Deviation
Cardiorespiratory Fitness	BEED	3.723	0.625
Cardiorespiratory Fitness	BSED FIL	3.821	0.716
Cardiorespiratory Fitness	BSED MATH	3.355	0.592
Cardiorespiratory Fitness	BPED	3.885	0.520
Muscular Strength	BEED	3.296	0.678
Muscular Strength	BSED FIL	3.347	0.821
Muscular Strength	BSED MATH	2.775	0.783
Muscular Strength	BPED	3.425	0.662
Speed and Agility	BEED	3.156	0.692
Speed and Agility	BSED FIL	3.213	0.875
Speed and Agility	BSED MATH	2.662	0.746
Speed and Agility	BPED	3.279	0.872
Flexibility	BEED	3.673	0.719
Flexibility	BSED FIL	3.901	0.698
Flexibility	BSED MATH	3.318	0.880
Flexibility	BPED	4.040	0.688
As a whole		3.396	0.6095

Table 4 presents the physical fitness scores based on the major courses of the respondents who are pursuing a Bachelor of Secondary Education (BSED). According to a study, the influence of college program enrolment on the physical fitness of students is a topic that may lack specific

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research studies directly examining its impact [5]. However, it is logical to assume that different college programs or disciplines can have varying effects on students' physical activity levels and overall fitness. Programs that involve physical education, sports science, or similar fields are likely to offer more opportunities for physical activity and fitness training, potentially leading to better physical fitness outcomes. Conversely, programs that prioritize sedentary study or focus primarily on theoretical coursework may have less emphasis on physical activity.

Table 5. ***Self-Efficacy of Education students when Taken Collectively***

Dimension	mean	sd	Verbal interpretation
Self-Efficacy	3.727	0.814	Moderate

Table 5 presents an overview of the respondents' self-efficacy levels when taken collectively. In this case, the respondents rated their self-efficacy in the moderate range. This means that, as a group, the respondents generally expressed a moderate level of belief in their capabilities to perform tasks or succeed in the specific dimension of self-efficacy being measured.

As discussed in definition of self-efficacy, refers to an individual's belief in their ability to perform specific actions required to achieve desired outcomes [26]. He also added how self-efficacy affects students' goal setting, effort expenditure, persistence, and utilization of effective learning strategies. Students with higher self-efficacy tend to set more challenging goals, exert greater effort, persist in the face of obstacles, and engage in effective learning strategies.

Table 6. ***Self-Efficacy of Education students in terms of Sex***

Area	Sex	Mean	Std. Deviation
Self-Efficacy	Female	3.679	0.868
Self-Efficacy	Male	3.841	0.661

Table 6 findings elucidate the differences in physical fitness and self-efficacy scores between males and females, providing insights into the variations in these attributes across genders within the sample. The results agree with a study about the analysis of self- perceived physical fitness of physical education students in Public Schools in Spain. It was revealed that male students have higher cardiorespiratory fitness, muscle strength, and speed but obtained lower flexibility results than female students [16].

Gender influences self-efficacy, the belief in one's capabilities to achieve goals [18]. Research indicates variations between males and females across domains like academics and careers. Males often show higher self-efficacy in traditionally masculine areas, while females exhibit higher self-efficacy in domains like language and social skills [2]. Societal expectations, cultural norms, and biases shape these differences. However, gender differences in self-efficacy are not fixed or universal, varying among individuals and contexts. Overcoming stereotypes and biases is crucial for promoting equitable opportunities and fostering self-efficacies for all individuals, regardless of age.

Table 7. ***Self-Efficacy of Education students in terms of Year Level***

Area	Year Level	Mean	Std. Deviation
Self-Efficacy	1st year	3.667	0.794
Self-Efficacy	2nd year	3.778	0.830

Table 7 findings shed light on the disparities in physical fitness and self-efficacy scores between 1st Year and 2nd Year students, providing insights into the variations in these attributes across different stages of college education. Self-efficacy refers to an individual's

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belief in their ability to successfully perform tasks and achieve desired outcomes. As students' progress through different year levels in college, they gain knowledge, skills, and experiences that can impact their self-efficacy beliefs.

Research suggests that self-efficacy can vary across different stages of college education. For example, as students advance to higher year levels, they may develop more confidence in their abilities, become more proficient in their academic pursuits, and gain a better understanding of their chosen field of study. This increased competence and knowledge can positively influence their self- efficacy [20].

Moreover, the challenges and experiences encountered in specific year levels may also shape self-efficacy beliefs. For instance, students in their first year of college may face various academic and social adjustments, which can affect their self-efficacy in different areas [12]. As they progress to later years, they may become more accustomed to the college environment, leading to higher self-efficacy.

Table 8. ***Self-Efficacy of Education students in terms of Major Field of Specialization***

Area	Major Field of Specialization	Mean	Std. Deviation
Self Efficacy	BEED	3.543	0.786
Self Efficacy	BSED FIL	3.816	0.854
Self Efficacy	BSED MATH	3.781	0.733
Self Efficacy	BPED	3.795	0.807

College programs can have an impact on an individual's self-efficacy. Self-efficacy refers to an individual's belief in their ability to successfully accomplish tasks and achieve desired outcomes. Accordingly, college programs or majors can influence self-efficacy in several ways, such as by providing opportunities for skill development, offering a supportive learning environment, and fostering a sense of competence and achievement [11].

The results are in a disagreement to the findings who revealed that physical education students are more physically active since the focus of the curriculum is to provide knowledge of physical activity which the students will participate in and use in their future career [24].

Table 9. ***Difference of Physical Fitness in terms of Sex***

	Test	Statistic	df	p
Physical Fitness-ALL	Student	0.016	232	0.987
Mann-Whitney		5743.500		0.995

These results support the findings of a previous study conducted which also observed that male participants exhibited a higher level of physical fitness [17]. Additionally, the study found that physical fitness tends to slightly increase with age regardless of sex. It was also noted that normal-weight or physically active schoolchildren had better aerobic capacity and a healthier body composition.

Table 10. ***Difference of Physical Fitness in terms of Year Level***

	Test	Statistic	df	p
Physical Fitness-ALL	Student	-2.4040	232	0.043
	Mann-Whitney	5685.000		0.033

These findings align with a previous study conducted which highlighted that approximately 50% of college students do not perceive themselves as engaging in sufficient physical activity

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[10]. The study also reported that 33% of the surveyed students participate in some form of physical activity, while 17% reported no exercise in their daily routine. Despite the numerous rewarding benefits associated with physical activity, many students fail to engage in regular physical activities, which are essential for maintaining a healthy lifestyle.

Table 11. ***Difference of Physical Fitness in terms of Major Field of Specialization***

Cases	Sum Square	df	Mean Square	F	p
Major Field of Specialization	6.701	3	2.234	5.951	<.001
Residuals	86.319	230	0.375		

These findings align with a previous study conducted in BMC Public Health, which reported a significant decrease in regular exercise during the college years compared to the pre-college school years [1]. This suggests that college students tend to engage in less physical activity as they transition into higher education. Considering this decrease in physical exercise, it is recommended to implement various strategies to address this issue.

Table 12. ***Difference of Self-Efficacy in terms of Sex***

	Test	Statistic	df	p
Self Efficacy	Student	-1.402	232	0.162
	Mann-Whitney	5558.500		0.702

Some studies suggest the presence of sex differences in self-efficacy, the findings are not consistent across all contexts and tasks. A study states that influence of cultural and societal factors, methodological considerations, and developmental differences should be considered when interpreting research findings on sex differences in self-efficacy [9]. It is essential to recognize that individual differences within each sex far outweigh any general trends or averages found in research.

Table 13. ***Difference of Self-Efficacy in terms of Year Level***

	Test	Statistic	df	p
Self Efficacy	Student	-1.038	232	0.300
	Mann-Whitney	5980.000		0.118

In summary, the findings from Table 13 suggest that there are no significant differences in the self-efficacy based on year level. However, it is crucial to address the low levels of physical activity among college students and raise awareness about the benefits of regular exercise for maintaining a healthy lifestyle during this transitional phase of life.

According to research, the year level or stage of college education can have an impact on students' self-efficacy beliefs [3]. As students' progress through different years of college, they gain experiences, knowledge, and skills that can shape their perceptions of efficacy. Advancing through college allows students to accumulate mastery experiences, acquire specialized knowledge, become more familiar with the college environment, and observe successful peers, all of which can contribute to increased self-efficacy. Additionally, as students specialize in their chosen major, they may develop confidence and expertise, further influencing their self-efficacy beliefs [3].

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Table 14. ***Difference Self-Efficacy in terms of Major Field of Specialization***

Cases	Sum Square	df	Mean Square	F	p
Major Field of Specialization	6.701	3	2.234	5.951	<.001
Residuals	86.319	230	0.375		

In college, students often can select a major or area of specialization as they progress in their academic journey. This choice allows students to focus their efforts and concentrate on developing expertise in a specific discipline or field. As students gain knowledge and accumulate experiences within their chosen major, they may witness an increase in self-efficacy related to their academic pursuits within that specific domain [7].

Table 15. ***Relationship between Physical Fitness and Self-Efficacy***

Correlates	Computed rho	p-value	Significance@0.05	Status of Hypothesis
Physical Fitness And Self-Efficacy	0.278	0.000	Significant	Rejected

A study highlighted how self-efficacy beliefs can significantly impact individuals' engagement in physical fitness activities [8]. By understanding and addressing self-efficacy, practitioners, coaches, and individuals themselves can develop strategies to enhance self-efficacy and promote sustained participation in physical activity.

4. Conclusion

It can be concluded that increasing physical activity and physical fitness may improve academic performance and that time in the school day dedicated to recess, physical education class, and physical activity in the classroom may also facilitate academic performance while self-efficacy can boost student achievement, foster emotional health and well-being, and serve as a valid predictor of motivation and learning.

The significant difference in the level of physical fitness when grouped according to sex, year level, and major field specialization can be concluded that being fit makes you active, allows you to tackle more tasks in a day, and boosts your energy levels and confidence in yourself. Not only that but completing a certain workout challenge gives you the feeling of satisfaction and trains your mind to have stronger willpower. While having a high level of self-efficacy, you are more likely to accomplish tasks. Self-efficacy affects your motivation, learning capacity, and performance. It would develop also self-efficacy where an individual's belief in his or her capacity to execute behaviors necessary to produce specific performance attainments.

The significant difference in self-efficacy when grouped according to sex, year level, and major field specialization therefore, maintaining a physically fit body will overall make you stronger, and live a healthy lifestyle. Being physically fit will improve the performance of all the muscles in your body including your heart, and helps with balance, power, speed, coordination, and many more aspects. While People with a high sense of self-efficacy demonstrate more positive affect and lower perceived exertion during physical exercise.

The significant difference in self-efficacy when grouped according to sex, year level, and major field specialization gave the conclusion that physical fitness balance and coordination can help one stay functionally fit, maintain focus and cognitive function and even improve

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health span. Similarly, people with a high sense of self-efficacy demonstrate more positive affect and lower perceived exertion during physical exercise.

5. Recommendation

Physical education teachers continuously update themselves with new approaches, methods, strategies, and techniques to help their students to be physically fit. This can be done by attending seminars, training, and workshops related in teaching physical education. Through this, they can bring out innovations in their teaching and improve the performance of the students in physical activities. School heads and administrators support programs related to physical fitness. They can encourage students to exercise and maintain a healthy diet through educating students the importance of physical health.

It is important that PATHFIT 1 students realize the importance of the physical fitness. For them to understand that maintaining a physically fit body can make them stronger and live a healthy lifestyle. School administrators create effective plans to enhance and monitor their students' physical fitness and self-efficacy. It is recommended that physical education teachers help their students to improve their physical fitness as well as their self- efficacy because these two are essential component in their overall well-being.

To increase the self-efficacy of students it is essential to commend their achievements and effort in accomplishing a certain task. Implement physical fitness and self-efficacy program to improve positive exercise behaviors of students and improve students' self-efficacy and overall mental health. For future researchers, to conduct studies on physical fitness and self-efficacy, it is recommended to further investigate on the influence of other domains related to physical fitness that are not mentioned in this study.

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