



Self Efficacy and Sports Performance of Secondary Student - Athletes: Training Implications

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ABSTRACT

Self-efficacy, which Albert Bandura defines as an individual's belief in his or her capability to perform the actions that will produce a desired outcome, is considered important for secondary school student-athletes because these individuals have been faced with the reality of having to balance academic and athletic demands. Even though self-efficacy seems to be positively related to performance across a wide range of activities, its role in regard to the sport performance of young athletes is less clearly understood. The present study, therefore, wishes to fill this gap by investigating the relationship between self-efficacy and athletic performance relating to secondary school student-athletes, predicated on some demographic factors such as gender, academic performance, and extra-curricular activities. Anchored essentially on Bandura's Social Cognitive Theory, this study investigates the relationship of sources of self-efficacy, namely mastery experiences, vicarious learning, verbal persuasion, and physiological states, to sports performance. It adopted a descriptive-comparative-correlational research design, in which there were 266 secondary school student-athletes in Quezon City, NCR, for School Year 2023-2024. Data are gathered using the Athlete Self-Efficacy Scale and the Sports Performance Perception Scale, both validated for reliability. The results showed that the better one's self-efficacy, the higher sports performance. However, there were significant differences by awarders but not by gender, academic average, and extracurricular activities. Thus, from this, it could be inferred that targeted interventions around goal setting, mental conditioning, and mentorship programs may help enhance their levels of self-efficacy and athletic performances. The study provides useful insights for coaches, educators, and policymakers in constructing strategies to support holistic development in student-athletes.

Keywords:*self-efficacy, athletic performance, student-athlete, sport psychology, secondary school.*

INTRODUCTION

Self-efficacy, a term developed by Albert Bandura, refers to an individual's belief in their capability to execute the course of actions that produce specific performance attainments (Bandura, 1997). This is important for athletes at the level of secondary education, where the challenge of excellently combining academic endeavors with athletics is quite common. Research has shown that high self-efficacy is related to higher performance in a variety of areas, from athletics to academics (Schunk & Pajares, 2002). In athletic performance, this system of beliefs includes physical ability as well as mental toughness and confidence in abilities, particularly important features for acting and making decisions when in highly competitive and pressured environments (Feltz & Lirgg, 2001). The previous literature highlighted a significant gap in the current body of literature regarding the relationship between self-efficacy and athletic performance among high school student-athletes. While self-efficacy has been extensively studied in various fields, such as education and general psychology, its specific impact on sports performance in the context of secondary education is not fully understood (Moritz et al., 2000). Furthermore, most previous research has concentrated on adult athletes or college students, leaving a void in our understanding of how self-efficacy is perceived and utilized by younger athletes, who are still in a crucial stage of development (Eccles & Barber, 1999). Our research is designed to fill this gap by investigating the influence of self-efficacy on athletic performance in secondary school student-athletes, with a focus on establishing demographic moderation, such as by gender, academic performance, and extracurricular activity participation. In this respect, the present study contributes to the existing literature by investigating how self-efficacy interplays with athletic performance in a sample of secondary student-athletes. According to this research, by increasing knowledge of the dynamics between these two variables, more efficient training programs could be created and tailored to meet the unique needs of young athletes (Vealey, 2001). Specifically, research will be conducted on various sources of self-efficacy, including mastery experiences—successful performance of a task—vicarious learning—witnessing accomplishments of others—and verbal persuasion, which emanates from coaches and peers in the form of motivation, in addition to physiological states, which pertain to the physical and emotional responses toward competition (Bandura, 1994). The results of this study seek to provide coaches, educators, and decision-makers with constructive suggestions to help them develop strategies that enhance athletic performance and support the holistic development of student-athletes (Dziewaltowski et al., 1990).

Research Paradigm

The theoretical framework for this study is based on Bandura's Social Cognitive Theory, focusing on the role of self-efficacy in creating enhanced belief or a sense of being able to succeed at tasks, most notably in times of trouble. This study specifically targets student-athletes at the secondary school level, where self-efficacy will play an exceedingly important role in the formative years of both athletic performance and the hardiness of self-efficacy. Bandura's SET identifies four primary sources that affect self-efficacy, which form the core around which this research has been constructed: mastery experiences, vicarious learning, verbal persuasion, and physiological states. Each of these elements has an immense effect on the performance of an athlete. Mastery experience means learning from success and failure; vicarious learning by observing others' outcomes; verbal persuasion, such as by encouragement from others or by self-talk; and physiological states, such as anxiety, that affect self-efficacy.

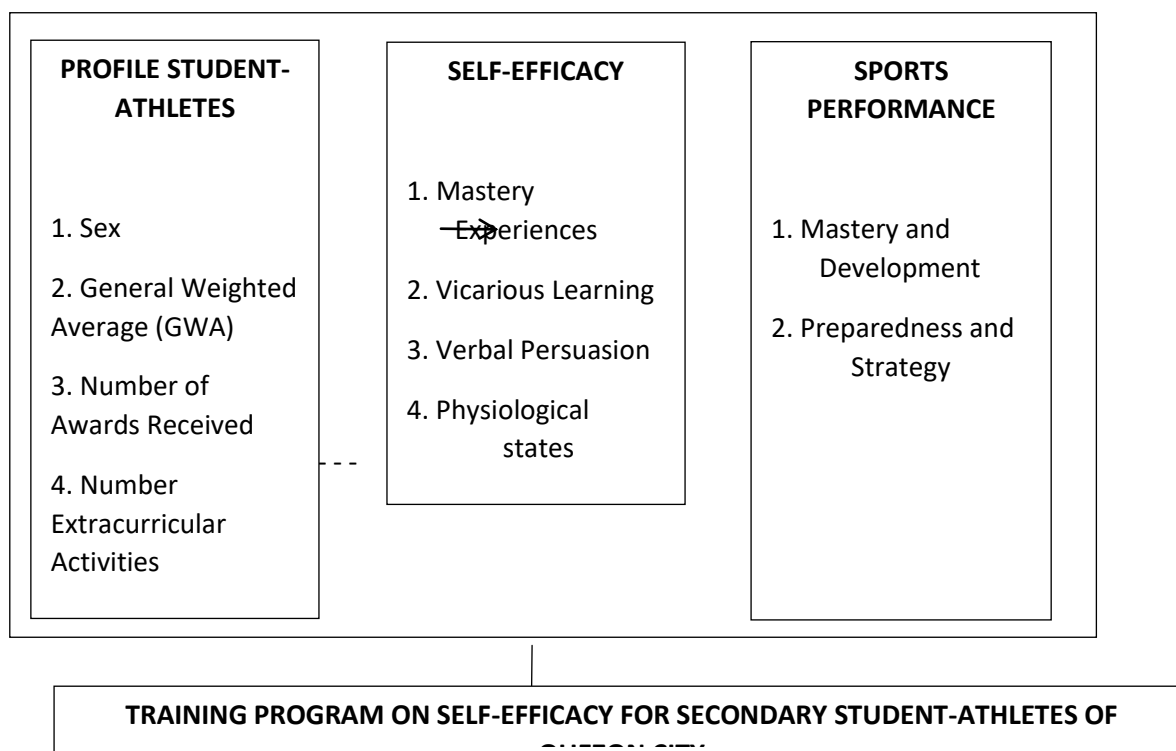


Figure 1. Conceptual Framework

This research attempts to determine the relationship of these sources with sports performance among secondary student-athletes and further tries to assess differences in self-efficacy according to demographic factors such as sex, general weighted average, number of awards received, and extracurricular activities. Understanding these relations may result in an enhanced training program, better psychological services, and coaching strategies leading to athletic success. The study also acknowledges that while, in general, self-efficacy leads to superior performance, other variables such as skill level, physical conditioning, mental preparation, or even external factors of distractions can very substantially affect it. Depending on the conceptual framework guiding the research, the inter-relations among student-athletes profiles, self-efficacy, and sports performance would influence how the design of training programs would enhance self-efficacy and, consequently, athletic performance.

Methodology

This is a descriptive-comparative-correlational method conducted in a non-experimental quantitative setting. It was used to describe variables, profiles, self-efficacy, and sports performance of secondary student-athletes; compare these variables across different groups without manipulation; and find correlations between Self-Efficacy and Sports Performance. It tests the differences in self-efficacy based on sex, GWA, the number of awards received, extracurricular activities, and other demographic factors. The required sample size is determined to be 266, using the Qualtrics Sample Size Calculator; with the sampling strategy, a simple random proportional strategy is done from District V in Quezon City, NCR, in the academic year 2023-2024.

Table2. Respondents of the Study

Secondary School	Total Population	Sample Size
1. Lagro High School	170	53
2. Maligaya High School	135	42

3. North Fairview High School	68	21
4. Dona Rosario High School	56	17
5. Novaliches High School	160	50
6. San Bartolome High School	130	40
7. Sta. Lucia High School	65	20
8. West Fairview High School	75	23
Total	859	266

Data were collected using a modified questionnaire, while the tools used in measuring PSE were the Athlete Self-Efficacy Scale by Kocak, 2020, and the Sports Performance Perception Scale by Adam et al., 2019. The tools were further validated by experts, and their reliability was tested through pilot testing and a Cronbach alpha test. Data gathering involved administering surveys via Google Forms, ensuring ethical considerations such as informed consent. Collected data were securely stored and analyzed, with results documented for the study's remaining chapters. Statistical analysis includes descriptive statistics to summarize the data regarding student-athletes' profiles, their self-efficacy, and sports performance, using frequency, mean, and percentage. Inferential Statistics, such as non-parametric analysis of difference was use to compare differences in self-efficacy and sports performance across different profiles. Spearman-rank correlation identifies the relationship of self-efficacy to sports performance based on mastery experiences, vicarious learning, verbal persuasion, and physiological states, showing how strongly these variables are related and how much self-efficacy influences athletic performance.

Result and Discussion

Level of self-efficacy. The result of studying self-efficacy levels among student-athletes was significant in four factors: Mastery Experience, Vicarious Experience, Verbal Persuasion, and Physiological State. The confidence level of students in the Mastery Experience category is very high in terms of accepting challenges, with an average weighted mean of 3.59, though slightly lower in maintaining focus against tough opponents, with an average of 3.36. The overall weighted mean in the Mastery Experience category was 3.46. On the Vicarious Experience scale, an overall weighted mean of 3.33 was produced, though these did range from a high of 3.49, where athletes would be most influenced by the observation of successful athletes, to a low of 3.22, where athletes would be least likely to actually imitate these behaviors. Verbal Persuasion had the best ratings in acknowledging teammates and motivational thoughts, with a mean of 3.52, while handling psychological pressures from opponents and audiences pulled the lower mean of 3.23. The overall weighted mean for Verbal Persuasion was 3.40. Physiological State was the factor that most athletes attended to in order to maintain health and energy with the highest mean of 3.53. Strength and endurance were attended to slightly less with a mean of 3.39. The overall weighted mean for this element was 3.46. On average, the student-athletes rated themselves to be very self-efficacious in both mastery experiences and physiological states, demonstrating the relevance of both mental and physical preparedness. Such findings are in support of Bandura's theory of self-efficacy, wherein coaches, trainers, or educators can facilitate an increase in athletes' confidence by improved skills through tasks, modeling, positive reinforcement, and physiological states—factors, which when modified, correspond to improved sports performance.

Table 1. Level of self-efficacy among student-athletes

INDICATORS	WEIGHTED MEAN	STANDARD DEVIATION	VERBAL INTERPRETATION
Mastery Experience	3.46	0.389	High Level
Vicarious Experience	3.33	0.412	High Level
Verbal Persuasion	3.40	0.417	High Level
Physiological State	3.46	0.433	High Level
OVERALL LEVEL OF SELF-EFFICACY	3.41	0.368	High Level

The result shows that there is no significant differences were observed in terms of self-efficacy when considering factors like gender, with a Mann-Whitney U test giving $U = 1250.5$, $p > 0.05$; academic performance, with a Kruskal-Wallis test giving $\chi^2 = 2.34$, $p > 0.05$; and the number of extracurricular activities, with a Kruskal-Wallis test giving $\chi^2 = 1.89$, $p > 0.05$. This means that these factors do not impact self-efficacy with regard to sports. In addition, no significant differences in self-efficacy were found between male and female athletes, and academic success did not seem to be a determinant of confidence related to sports. The student-athletes, when divided based on the number of awards received, had a statistically significant difference: the more awards received, the more increased the self-efficacy, meaning that being recognized and successful in athletics strengthens an athlete's belief in their own abilities.

Table 2. Analysis of the difference in the level of self-efficacy among student-athletes when grouped according to the athletes profile

GROUPING		INDICATORS	TEST VALUE	P-VALUE	VERBAL	
VARIABLE	DECISION				INTERPRETATION	DECISION
Gender	Mastery Experience	7845.50	0.319	not significant	<i>accept null hypothesis</i>	
	Vicarious Experience	7893.00	0.359	not significant	<i>accept null hypothesis</i>	
	Verbal Persuasion	7962.00	0.421	not significant	<i>accept null hypothesis</i>	
	Physiological State			not significant	<i>accept null hypothesis</i>	
	Self- Efficacy	8194.00	0.673	not significant	<i>accept null hypothesis</i>	
General average	Mastery Experience	0.80	0.86	not significant	<i>accept null hypothesis</i>	
	Vicarious Experience	4.40	0.22	not significant	<i>accept null hypothesis</i>	
	Verbal Persuasion	1.80	0.613	not significant	<i>accept null hypothesis</i>	
	Physiological State	1.00	0.81	not significant	<i>accept null hypothesis</i>	
	Self- Efficacy	0.50	0.93	not significant	<i>accept null hypothesis</i>	
Number of awards	Mastery Experience	15.90	0.003	significant	<i>reject null hypothesis</i>	
	Vicarious Experience	5.80	0.216	not significant	<i>accept null hypothesis</i>	
	Verbal Persuasion	24.90	0	significant	<i>reject null hypothesis</i>	
	Physiological State	13.60	0.009	significant	<i>reject null hypothesis</i>	
	Self- Efficacy	16.20	0.003	significant	<i>reject null hypothesis</i>	
Extracurricular activities	Mastery Experience	10.10	0.12	not significant	<i>accept null hypothesis</i>	
	Vicarious Experience	4.40	0.627	not significant	<i>accept null hypothesis</i>	
	Verbal Persuasion	11.70	0.069	not significant	<i>accept null hypothesis</i>	
	Physiological State	7.20	0.305	not significant	<i>accept null hypothesis</i>	
	Self- Efficacy	8.00	0.235	not significant	<i>accept null hypothesis</i>	

The analysis of the levels of sports performance of student-athletes was assessed in terms of two areas; Mastery and Development, and Preparedness and Strategy. The student-athletes, under the dimension of Mastery and Development, highly committed themselves to the improvement of mastery skills; the highest was communication —thus proving its importance to teamwork, which is very important in sports performance. However, the lowest rated factor was that of participating in home and away games, which shows some difficulty in consistent play in competitive arenas. The item-average for the factor as a whole is extremely high, at 3.46 SD = 0.416, showing very high commitment and high self-mastery. In Preparedness and Strategy, the best-rated aspect was engagement with coaches, sport psychologists, and fellow players during practice. The results shows confirming the salience of having a more wholesome approach to training. The worst-rated was in respect to regular team practice. This might indicate motivational issues that have spills into other aspects of the overall performance of the team. The mean of Preparedness and Strategy gave 3.35 (SD = 0.452). While sports performers were relatively well-prepared, there were many aspects that are definitely to be improved, particularly those concerning team training. The overall mean of sports performance yielded 3.41 (SD = 0.410), reflecting that the levels of performance were relatively high, whereas issues such as regular team training and participation in competitive play needed more attention. These findings are consistent with available literature that has examined the contribution of individual skill development and collective effort and lately, mental and psychological preparation as part of sports success.

Table 2. level of sports performance of student-athletes

	WEIGHTED MEAN	STANDARD DEVIATION	VERBAL INTERPRETATION
Mastery and Development	3.46	0.416	High Level
Preparedness and Strategy	3.35	0.452	High Level
OVERALL LEVEL OF SPORTS PERFORMANCE	3.41	0.410	HIGH LEVEL

There were no significant differences in sports performance with respect to gender: $p = 0.661$, 0.355 , and 0.388 for Mastery and Development, Preparedness and Strategy, and overall Sports Performance, respectively; and with respect to general academic average: $p = 0.846$, 0.690 , and 0.844 . These findings indicate that male and female athletes are pretty much the same when it comes to performance in sports and their academic performance does not have a significant effect on this. Moderately significant differences were found, however, when student-athletes were grouped according to the number of sports awards received. This was equally the case on all factors: $p = 0.008$ for Mastery and Development, 0.002 for Preparedness and Strategy, and 0.007 overall for Sports Performance. Student-athletes with more awards performed better in all respects, which may indicate that recognition/achievements in sports enhance performance by the motivational effects from awards. The differences were not significant by the number of extracurricular activities: $p = 0.116$, 0.051 , and 0.066 . This means that other activities do not affect sports performance.

Table -. Analysis of difference in sports performance with respect to their profile

Grouping variable	INDICATORS	Test value	P-VALUE	N	VERBAL INTERPRETATION	
					DECISION	DECISION
Gender	Mastery and Development	135.16	8186	0.661	not significant	<i>accept null hypothesis</i>
	Preparedness and Strategy	137	7889	0.355	not significant	<i>accept null hypothesis</i>
	Sports Performance	136.78	7925	0.388	not significant	<i>accept null hypothesis</i>
General average	Mastery and Development	148.75	0.8	0.846	not significant	<i>accept null hypothesis</i>
	Preparedness and Strategy	134.83	1.5	0.69	not significant	<i>accept null hypothesis</i>
	Sports Performance	136.67	0.8	0.844	not significant	<i>accept null hypothesis</i>
Number of awards	Mastery and Development	116.96	13.7	0.008	significant	<i>reject null hypothesis</i>
	Preparedness and Strategy	117.27	16.9	0.002	significant	<i>reject null hypothesis</i>
	Sports Performance	117.74	14.2	0.007	significant	<i>reject null hypothesis</i>
Extracurricular activities	Mastery and Development	131.11	10.2	0.116	not significant	<i>accept null hypothesis</i>
	Preparedness and Strategy	129.81	12.5	0.051	not significant	<i>accept null hypothesis</i>
	Sports Performance	132.47	11.8	0.066	not significant	<i>accept null hypothesis</i>

It established that the correlation coefficient in the relationship between self-efficacy and sports performance was 0.917 . That would mean the higher the level of self-efficacy, the better the sports performance. With its significant correlation, a p -value of $.000$ rejects the null hypothesis that self-efficacy has no influence on sports performance.

	Correlation Coefficient	P-VALUE	VERBAL INTERPRETATION	DECISION
Self- Efficacy and Sports Performance	.917	.000	High positive correlation	Reject Ho

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

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

0.90 to 1.00 (-.90 to -1.00) - Very high positive (negative) correlation

0.70 to 90 (-.70 to -.90) - High positive (negative) correlation

0.50 to .70 (-.50 to -.70) - Moderate positive (negative) correlation

0.30 to .50 (-.30 to -.50) - Low positive (negative) correlation

0.00 to .30 (.00 to -.30) - negligible correlation

Conclusion

This therefore concludes that, overall, student-athletes are very highly self-efficacious in a number of dimensions, showing strong beliefs in abilities and performance strategies. If anything, there were no significant differences in self-efficacy based on gender or general average, or even the number of extracurricular activities; however, there were significant differences based on the number of awards received, indicating that more awards equate to higher self-efficacy. Furthermore, student-athletes exhibit sports performance of a high level in mastery, development, and strategic preparedness, with quite an obvious link between the amount of awards and performance levels. There is a high positive relationship between self-efficacy and sports performance, thereby justifying the development of self-efficacy in any way to improve athletic performance.

Recommendations

Improve the self-efficacy of student-athletes through goal setting, feedback mechanisms, and mental conditioning exercises in the training program, accompanied by workshops that will enhance psychological resilience through stress control and positive self-talk. Self-efficacy is enhanced if an acknowledgment or reward is given after good performances; further research is required on support systems and environments. Man sporting skills through progressive development, strategic planning, and mental conditioning of athletes for the realization of this goal, aided by individual training programs and performance reviews. There should be mentorship programs for different athletics events led by award-winning athletes who can inspire and drive all athletes towards excellence. Design targeted interventions in confidence-building workshops and mental skills training courses to help bolster self-efficacy and consequently sports performance.

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