



Comprehensive School Physical Activity Program and Academic Performance of Students in Physical Education

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Abstract - This study investigated the implementation of the Comprehensive School Physical Activity Program (CSPAP) at Hanawan National High School during the 2023–2024 school year, to inform Physical Education (PE) reforms. Specifically, it examined: (1) the level of CSPAP implementation; (2) students' performance in PE; (3) the relationship between CSPAP implementation and PE performance; (4) the extent of CSPAP's influence on students' performance; and (5) potential reforms to enhance both CSPAP implementation and PE outcomes. Employing a descriptive-correlational design with documentary analysis, the study utilized a researcher-made questionnaire administered to 238 students. Students' PE grades were analyzed using statistical tools, including weighted mean, mean, standard deviation, Pearson's r , and coefficient of determination. Results revealed that the CSPAP was implemented at a high level ($AWM = 3.27$), while students' PE performance averaged 82.23 ($SD = 5.66$). No significant relationships were found between CSPAP components and students' academic performance in PE, with correlation values ranging from $r = -0.23$ to 0.46 and p -values exceeding 0.05. The influence of CSPAP on PE performance was from very weak to weak, with the highest r^2 -value (21%) noted for physical activity before and after school. Based on these findings, the study recommends reforms focusing on curriculum enhancement, structured physical activities, teacher professional development, and strengthened community involvement to improve both CSPAP execution and student performance.

Keywords - Comprehensive School Physical Activity Program, Physical Education, Students

INTRODUCTION

The implementation of a Comprehensive School Physical Activity Program (CSPAP) is essential for promoting students' holistic development, yet it continues to encounter numerous challenges. These include limited resources, inadequate infrastructure, and insufficient funding, which hinder the availability of necessary facilities, equipment, and trained personnel to deliver effective physical activity programs. In many schools, physical education is further marginalized due to the prioritization of academic achievement, particularly standardized test scores, over students' physical and mental well-being. Additionally, prevailing cultural attitudes and misconceptions regarding the value of

physical education—especially in contexts where academic performance is overly emphasized—serve as significant barriers to widespread program adoption.

Efforts to reform physical education remain constrained by entrenched policies, minimal teacher training, and a lack of innovative, student-centered instructional practices. Despite growing evidence that regular physical activity improves cognitive function, concentration, and memory, outdated and rigid PE curricula continue to miss opportunities to integrate these findings meaningfully. As highlighted in existing literature, many educators lack access to sustained professional development, preventing them

from implementing movement-based learning strategies that can enhance both physical fitness and academic outcomes. Furthermore, fragmented reform initiatives often lead to inconsistent implementation, underscoring the need for a unified, system-wide approach that promotes lifelong physical activity and academic excellence.

Student engagement in physical activity programs is shaped by a range of factors, including socioeconomic status, personal motivation, and accessibility. Limited school funding can prevent the provision of proper equipment or appropriate attire, posing participation barriers—particularly for students from underserved backgrounds. Teachers may also lack the training or support required to effectively implement CSPAP components, resulting in inconsistencies and reduced program efficacy. Moreover, social pressures, self-consciousness, and non-inclusive activities can discourage student participation, especially when programs do not accommodate diverse needs and abilities. Without strong leadership, cohesive strategy, and clear accountability, CSPAP implementation risks fragmentation, undermining its long-term objectives of fostering lifelong fitness habits.

The success of CSPAP initiatives is heavily dependent on the engagement and commitment of educators and school personnel. However, this is often overlooked. Teachers may feel overwhelmed by their existing responsibilities, making it difficult for them to champion additional programs without adequate support or recognition. Even when school leadership is supportive, the absence of tangible incentives or structured professional development often leads to inconsistent staff involvement, thereby weakening the program's implementation and impact.

At the global level, the World Health Organization (WHO) advocates for increased physical activity through its *Global Action Plan on Physical Activity 2018–2030*, which aims to reduce global physical inactivity by 15% by 2030. The WHO's seventh dialogue with the sports industry, held in December 2023, emphasized the importance of leveraging digital innovation and multisectoral collaboration to broaden access to physical activity. These efforts, however, continue to be challenged by infrastructural deficiencies, funding limitations, and persistent cultural and socioeconomic barriers—especially in marginalized communities.

In a recent study conducted in China, Du et al. (2023) examined the relationship between physical activity and academic performance among college students. Using machine learning to analyze behavioral data, the study demonstrated that regular physical activity significantly enhances academic performance. The findings offer important insights for policymakers seeking to integrate physical activity into educational frameworks to promote cognitive development and student success.

This study also supports the objectives of several Sustainable Development Goals (SDGs). Specifically, SDG 3: Good Health and Well-Being aligns with CSPAP implementation, particularly Target 3.4, which seeks to reduce premature mortality from non-communicable diseases and promote mental health and well-being through preventive measures like school-based physical activity programs. Furthermore, SDG 4: Quality Education is supported by evidence that physical activity enhances learning outcomes, fosters equitable education, and contributes to lifelong learning. Notably, Target 4.1 (quality primary and secondary education), 4.6 (literacy and numeracy), 4.7 (education for sustainable development), and 4.a (inclusive and effective learning environments) collectively affirm the interconnectedness of education, health, and sustainable development.

At the national level, the Philippine Department of Education (DepEd) has undertaken significant curricular reforms under the MATATAG Curriculum, including the 2023 integration of Physical Education and Health into a unified subject. This reform aims to produce “physically and health-literate students” who can make informed health decisions and become advocates for wellness. It emphasizes the interconnectedness of physical fitness, nutrition, mental health, and disease prevention while encouraging interdisciplinary learning. This holistic approach provides students with essential knowledge and practical skills, while maximizing school resources and class time to address pressing public health issues such as obesity and chronic disease.

Public high schools, such as Hanawan National High School, face specific challenges in implementing CSPAP. These include limited physical infrastructure, teacher workload constraints, and variable student participation often influenced by socioeconomic disparities and academic demands.

Despite these hurdles, schools endeavor to promote physical activity through curriculum integration, extracurricular activities, and partnerships with local communities—efforts that mirror broader initiatives to strengthen public health through education.

This study is therefore timely and necessary. It investigated the current level of CSPAP implementation in a public high school context, assessed its influence on students' performance in PE, and offered evidence-based recommendations for Physical Education reforms. By addressing key challenges such as resource limitations, teacher preparedness, and student engagement, the research contributes to the alignment of educational practices with national and global health agendas. Ultimately, this study supports the development of more inclusive, sustainable, and effective physical education strategies that promote both academic achievement and lifelong wellness.

OBJECTIVES OF THE STUDY

This study aimed to determine the extent of implementation of the Comprehensive School Physical Activity Program (CSPAP) at Hanawan National High School during the School Year 2023–2024 and to utilize the findings as a basis for proposing reforms in Physical Education. Specifically, the study sought to assess the level of implementation of CSPAP across its five core components, namely: Physical Education; physical activity during the school day; physical activity before and after school; staff involvement; and family and community involvement. Through this, the research endeavored to provide a holistic evaluation of how physical activity is integrated into the daily life of the school community.

In addition, the study aimed to determine the level of students' academic performance in Physical Education, thereby establishing an empirical basis for understanding learner outcomes in relation to CSPAP implementation. It also sought to examine whether a significant relationship exists between the extent of CSPAP implementation and students' academic performance in Physical Education. Furthermore, the research intended to assess the degree to which CSPAP influences student outcomes in Physical Education, exploring the strength and nature of this influence within the school context.

Ultimately, the study aimed to formulate appropriate and evidence-based Physical Education reforms. These reforms are envisioned to enhance the implementation of CSPAP and, consequently, improve students' academic performance and overall physical well-being. By identifying gaps and opportunities, the study contributes to the development of more inclusive, effective, and sustainable physical activity programs in public secondary schools.

METHODS

This study employed a descriptive-correlational research design to evaluate the implementation of the Comprehensive School Physical Activity Program (CSPAP) and its relationship to students' academic performance in Physical Education (PE), with the goal of informing potential reforms. The descriptive aspect was used to assess the extent of CSPAP implementation across five dimensions—Physical Education, physical activity during and beyond school hours, staff involvement, and family and community participation—and to evaluate students' performance in PE. The correlational approach determined the significance and extent of the relationship between CSPAP implementation and PE performance. Documentary analysis of official academic records was used to obtain students' PE grades.

The respondents included all 238 Grade 7 students of Hanawan National High School, selected through total enumeration. Data were collected using a validated, researcher-made questionnaire that measured the perceived level of CSPAP implementation. The instrument consisted of five components with five indicators each, rated on a four-point Likert scale. Documentary analysis was also conducted to evaluate academic performance in PE. Data collection followed a structured process—from the approval of the research title and permits to the validation, administration, and retrieval of the instruments. Data were analyzed using weighted mean to assess implementation levels, Pearson correlation to determine relationships, and coefficient of determination to measure influence. These methods provided the empirical basis for proposing Physical Education reforms.

RESULTS AND DISCUSSION

Table 1 presents the level of implementation of the Comprehensive School Physical Activity Program (CSPAP) across five key areas. The overall implementation was high, with an average weighted mean (AWM) of 3.27, interpreted as *Strongly Agree*. Both Physical Education and Physical Activity during the School Day ranked highest with an AWM of 3.54, indicating strong integration of structured and routine physical activities within the school environment.

Table 1. Summary of the Level of Implementation of the Comprehensive School Physical Activity Program

Aspects	AWM	Int.	Rank
Physical Education	3.54	SA	1.5
Physical Activity during the school day.	3.54	SA	1.5
Physical activity before and after school.	3.07	A	4
Staff involvement.	3.25	A	3
Family and community involvement.	2.95	A	5
Overall Average Weighted Mean	3.27	Strongly Agree	

Meanwhile, Physical Activity before and after school (AWM = 3.07) and Staff Involvement (AWM = 3.25) showed moderate implementation levels, pointing to opportunities for improvement in extracurricular physical activity and increased engagement from staff. Family and Community Involvement received the lowest rating (AWM = 2.95), reflecting limited participation from external stakeholders.

These results suggest that although school-based components of CSPAP are effectively implemented, enhancing collaboration with families and the wider community is necessary to support a more comprehensive and sustainable physical activity program.

Building on the assessment of the Comprehensive School Physical Activity Program’s implementation, the results on the level of students’ academic performance in Physical Education showed that most students (102) scored between 80-84, indicating a solid mid-to-high achievement level. High performers (90-100) numbered 23, while 38 scored 85-89. Meanwhile, 63 students scored 75-79,

and 12 scored below 74, signaling a group needing additional support.

Table 2. Level of Students’ Academic Performance of the Students

Average Grades	Total
90-100	23
85-89	38
80-84	102
75-79	63
74 Below	12
Total	238
	Mean = 82.23 sd = 5.66

The mean score of 82.23 shows overall above-average performance, but the standard deviation of 5.66 reveals notable variability in achievement. This suggests a mix of high and low performers, highlighting the need for targeted interventions and differentiated instruction to address diverse learning needs and improve outcomes.

The analysis of the relationship between the Comprehensive School Physical Activity Program (CSPAP) and students’ academic performance, as shown in Table 3, indicates no statistically significant correlations across all measured aspects. The highest correlation was observed between Physical Activity Before and After School and academic performance ($r = 0.46$), categorized as a moderate correlation; however, this relationship was not statistically significant ($p = 0.432$), suggesting that any positive association is inconclusive. Other components, including Physical Education ($r = 0.11$, $p = 0.866$), Physical Activity During the School Day ($r = -0.06$, $p = 0.928$), Staff Involvement ($r = 0.01$, $p = 0.988$), and Family and Community Involvement ($r = -0.23$, $p = 0.704$), showed negligible to low correlations, none reaching statistical significance.

Table 3. Relationship Between CSPAP and Academic Performance

Level of Implementation	Academic Performance	r-value	p-value	Interpretation
Physical Education	Academic Performance	0.11	0.87	Not Significant
Physical Activity during School Day	Academic Performance	-0.06	0.93	Not Significant
Physical Activity Before and After School	Academic Performance	0.46	0.43	Not Significant

Staff involvement	Academic Performance	0.01	0.99	Not Significant
Family and Community Involvement	Academic Performance	-0.23	0.70	Not Significant

Legend:

Scale Interval

Less than ± 0.20 ± 0.20 to ± 0.39 ± 0.40 to ± 0.69 ± 0.70 to ± 0.89 ± 0.90 to ± 1.00

Interpretation

Negligible Correlation

Low Correlation

Moderate Correlation

High Correlation

Very High (Perfect)

Correlation

Physical Activity Before and After School	Academic Performance	0.46	21%	Weak
Staff involvement	Academic Performance	0.01	0%	Very Weak
Family and Community Involvement	Academic Performance	-0.23	5%	Very Weak

Legend:

 r^2 -value

81%-100%

61%-80%

41%-60%

21%-40%

00%-20%

Interpretation

Very Strong

Strong

Moderate

Weak

Very Weak

These findings imply that while CSPAP may support physical health and wellness, its direct impact on academic performance in Physical Education is minimal based on the current data. The moderate but non-significant correlation with extracurricular physical activity suggests some potential influence on student outcomes, yet academic performance appears to be shaped more strongly by other variables beyond the scope of physical activity participation. Consequently, physical activity components of CSPAP contribute to holistic student well-being but do not directly translate to improved academic grades in this context.

The analysis of the extent of influence of the Comprehensive School Physical Activity Program (CSPAP) on academic performance, as detailed in Table 5, reveals that physical activity before and after school exerts the greatest impact, albeit a weak one, with an r -value of 0.46 and an r^2 -value of 21%. This indicates that participation in extracurricular physical activities may modestly contribute to better academic outcomes, potentially through enhanced cognitive function and well-being. Conversely, staff involvement showed virtually no influence on academic performance ($r = 0.01$, $r^2 = 0\%$), suggesting that teachers' engagement in CSPAP does not translate into measurable academic benefits for students. Similarly, physical education during school hours, physical activity during the school day, and family and community involvement all demonstrated very weak influence, with r^2 -values ranging from 0.3% to 5%, highlighting minimal correlation with student grades.

These results imply that while CSPAP components promote physical health and engagement, their direct effect on academic achievement is limited. The modest influence of physical activity outside school hours could be attributed to its role in supporting cognitive processes such as concentration and memory retention. However, structured school-based activities and adult involvement appear insufficient on their own to significantly affect academic performance. The findings reinforce the complexity of academic success, which likely depends on a multifaceted interplay of physical, cognitive, and environmental factors. Therefore, although CSPAP contributes positively to student health, its direct influence on academic performance is minimal, suggesting a need for further research to explore indirect benefits and complementary strategies that integrate physical activity with academic support.

The results indicate that targeted Physical Education reforms are necessary to improve the implementation of the Comprehensive School Physical Activity Program (CSPAP) and student outcomes. Revising the PE curriculum to include diverse activities and ensuring adequate resources can enhance student engagement and physical literacy. Expanding extracurricular opportunities before and after school, which showed the strongest albeit weak link to academic performance, may further support cognitive and physical benefits.

Staff involvement, though currently minimal in impact, can be strengthened through training and incentives to foster a more active school culture. Similarly, increasing family and community participation is vital for a supportive environment, even if its direct influence on academic outcomes is limited.

Table 4. Extent of Influence of CSPAP and Academic Performance

Level of Implementation	Academic Performance	r -value	r^2 -value	Interpretation
Physical Education	Academic Performance	0.11	1%	Very Weak
Physical Activity during School Day	Academic Performance	-0.06	0.3%	Very Weak

Differentiated strategies addressing the needs of high achievers and lower-performing students are essential to boost skills and motivation, responding to the wide variation in PE performance. Overall, these reforms provide a focused approach to enhance CSPAP implementation and promote both physical activity and academic growth among students.

CONCLUSIONS AND RECOMMENDATIONS

The study found that the Comprehensive School Physical Activity Program (CSPAP) is implemented at a moderate to strong level across key domains such as physical education and physical activity during the school day, with slightly lower involvement from staff and family/community members. Students generally perceive the program as being well-established in their schools.

Student academic performance in Physical Education (PE) was above average overall, although there was notable variation, indicating a range of achievement levels among learners. This highlights the need to address diverse student needs within PE.

Correlation analyses revealed no statistically significant relationship between the level of CSPAP implementation and students' academic performance in PE. Despite some moderate correlation observed with physical activity before and after school, the overall influence of CSPAP on academic outcomes was weak or very weak. This suggests that while CSPAP contributes positively to student well-being, its direct impact on academic performance may be limited or influenced by other factors.

Given these findings, Physical Education reforms are necessary to enhance the implementation of CSPAP and to promote higher student performance. These reforms should address curriculum design, teacher capacity, and broader stakeholder involvement to create a more engaging and supportive environment conducive to both physical and academic development.

To strengthen the implementation of the Comprehensive School Physical Activity Program and improve student outcomes, the following recommendations are proposed:

1. Schools should enhance family and community involvement and empower staff by building local partnerships, providing staff training on physical

activity integration, and diversifying the curriculum with movement-based exercises. Regular monitoring will sustain program improvements.

2. Implement targeted support for struggling students and enrichment for high achievers through personalized learning, ongoing assessments, and collaboration among teachers, parents, and administrators to boost academic outcomes.
3. Despite the weak link between CSPAP and academic performance, schools should improve program effectiveness with structured, goal-oriented activities, stronger family and community engagement, and increased staff participation to foster sustained student involvement.
4. Integrate active learning into daily lessons and promote consistent physical activity before and after school. Increase staff leadership and professional development while continuously assessing and refining strategies to enhance physical and academic growth.
5. Revise the curriculum to include diverse, inclusive activities; expand before- and after-school programs; and improve assessment systems. Ensure sustainability through policy support, resource allocation, and enhanced teacher training with innovative pedagogical methods to increase student engagement and performance.

These recommendations aim to create a holistic and sustainable approach that aligns CSPAP implementation with improved student outcomes in Physical Education, fostering healthier and academically more engaged learners.

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