THE EFFECT OF TRAINING HOURS ON THE ACADEMIC PERFORMANCE OF STUDENT-ATHLETES

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Abstract

Student-athletes continually face the challenge of balancing intensive training schedules with academic demands. This study investigated the effect of training hours on the academic performance of student-athletes at Dagupan City National High School during the Academic Year 2025–2026. Specifically, it examined differences in academic performance between student-athletes with high and low training hours, determined the relationship between weekly training hours and academic performance, compared academic class attendance rates between student-athletes and non-athletes, and proposed an action plan based on the quantitative findings. The study employed a quantitative, non-experimental design using correlational and comparative approaches. A total of 300 respondents participated in the study. Data were gathered from official institutional records on grade point average and attendance, and from a standardized self-report questionnaire on training hours and time management skills. The data were analyzed using the mean, standard deviation, independent-samples t-test, and Pearson product-moment correlation coefficient. Findings revealed that student-athletes with fewer training hours achieved a higher mean academic performance score ($M = 3.12$, $SD = 0.35$) than those with more training hours ($M = 2.85$, $SD = 0.42$), with the difference statistically significant. A significant moderate negative correlation was likewise established between training hours and academic performance ($r = -0.385$, $p < .001$). In addition, student-athletes recorded lower attendance rates than non-athletes, although those with high training hours reported better time management skills. The study concluded that excessive training hours adversely affect academic outcomes and class attendance, thereby necessitating institutional interventions that promote a healthier balance between athletic commitments and academic responsibilities.

Keywords: Training Hours, Academic Performance, Student-Athletes, Attendance Rate, Time Management, Quantitative Study

1. Introduction

School sports are widely recognized as a valuable component of learner development because they promote physical fitness, discipline, teamwork, leadership, and psychosocial well-being. In the Philippine setting, this educational value is explicitly reflected in current policy. DepEd's 2025 policy on School Sports Clubs frames organized sport as an extension of formal learning that supports holistic development and academic pursuits, while Republic Act No. 11470, or the National Academy of Sports Act, mandates a quality secondary education program integrated with a special curriculum on sports for student-athletes. Earlier DepEd guidance on the Special Program in Sports likewise emphasized the goal of achieving school-sport balance, signaling that athletic participation should not be separated from academic formation but harmonized with it. These policy directions show that the Philippine education system does not view sport as peripheral; rather, it treats sport as a legitimate developmental and educational domain that must be aligned with the broader goals of schooling.

However, the educational promise of sport is accompanied by a recurring structural challenge: student-athletes must simultaneously satisfy the demands of academic work and organized training. In the international literature, this is commonly described as the dual-

career condition. A 2025 scoping review covering 25 studies from 23 countries and more than 3,000 student-athletes concluded that dual-career athletes consistently face difficulties balancing academic and athletic commitments, with recurring barriers including inflexible educational arrangements, limited financial support, and insufficient access to coordinated institutional services. Importantly, the same review found that 88.5% of the studies came from European contexts, suggesting that the evidence base is geographically uneven and that more work is needed in non-European and developing-country settings. This concern is echoed by Gjaka et al. (2024), whose study of university student-athletes in Kosovo found that limited leisure time, academic overload, and frequent class absences were among the most commonly reported difficulties. Collectively, these findings suggest that the core issue is not whether sport matters in education, but how schools can prevent athletic commitments from eroding learning opportunities and academic continuity.

One of the clearest mechanisms through which heavy athletic involvement can affect schooling is time pressure. Training hours are not merely numerical indicators of participation; they represent a cumulative demand on time, energy, recovery, and attention. Astridge et al. (2021), working with high-performance dual-career student swimmers, showed that training and academic demands were associated with sleep quality, highlighting how the overlap of sport and study can compromise recovery. Similarly, Wang et al. (2024) found that study time and training time were the strongest predictors of sleep quality among dual-career collegiate badminton athletes, with lower study and training hours predicting better sleep quality. This evidence matters because inadequate sleep and impaired recovery can undermine concentration, memory, learning efficiency, and emotional regulation, all of which are central to academic functioning. In other words, the problem is not only that student-athletes are busy; the deeper issue is that high training load can disrupt the recovery systems needed for sustained classroom performance and scholastic success.

A related strand of evidence points to psychological spillover from the athletic domain into the academic domain. Xu et al. (2025) found that athlete burnout significantly predicted academic burnout among college athletes, with emotion regulation and sleep quality partially mediating that relationship. Their findings are important because they clarify that the burden of sport is not confined to physical fatigue alone. When training stress accumulates without adequate recovery, it can reduce motivation, weaken self-regulation, and impair academic engagement. This interpretation is highly relevant to school-based student-athletes, for whom training, travel, competition, and study requirements frequently converge within the same weekly schedule. If the training load becomes excessive, the resulting depletion may not simply reduce performance on the field; it may also diminish the learner's capacity to attend class consistently, complete academic tasks, and sustain cognitive effort over time. Such evidence supports the view that academic outcomes among student-athletes should be examined not only through grades but also through the interacting pathways of fatigue, attendance, stress, and self-management.

Attendance is another crucial dimension of this issue. In general education research, absenteeism has been shown to affect achievement negatively. Keppens (2023) reported that school absenteeism is detrimental to learning and academic achievement, with both sickness-related and unexcused absenteeism associated with poorer examination outcomes. Ha et al. (2024) likewise found a significantly positive effect of class attendance on academic performance, even in contexts where attendance was not mandatory for course grading. For student-athletes, this literature is especially significant because organized sport often requires training extensions, off-campus competition, and travel time, all of which may reduce direct exposure to instruction. At the same time, the relationship between sport and academic performance is not uniformly negative. In a Philippine high school study, Agustin (2022) found that student-athletes' academic performance improved after the implementation of a structured school sports support program, suggesting that the educational effects of sport depend greatly on how athletic participation is

supported, scheduled, and integrated into the school environment. Thus, the issue is best understood not as a simple opposition between sports and academics, but as a question of whether training demands are moderated by effective institutional support.

It is within this conceptual and policy context that the present study becomes necessary. The uploaded thesis shows that the study focuses on Dagupan City National High School during Academic Year 2025–2026 and investigates the effect of training hours on the academic performance of student-athletes. More specifically, it examines differences in academic performance between student-athletes with high and low training hours, determines the relationship between weekly training hours and academic performance, compares attendance rates between student-athletes and non-athletes, and uses the findings to develop an action plan. This focus is timely because it converts a broad dual-career concern into measurable school-level evidence. Rather than assuming that sports participation is either beneficial or harmful in itself, the study asks a more precise and educationally useful question: at what point do training demands begin to interfere with academic functioning? By addressing training load, attendance, and academic performance together, the study contributes evidence that can help schools, coaches, and administrators design more balanced support systems for student-athletes and protect both athletic development and scholastic achievement.

2. Method

2.1 Research Design

The study employed a quantitative, non-experimental research design using both correlational and comparative approaches to examine how training hours influenced the academic outcomes of student-athletes at Dagupan City National High School during Academic Year 2025–2026. This design was appropriate because the investigation sought to determine the strength, direction, and statistical significance of naturally occurring relationships and group differences without manipulating the independent variable, namely weekly training hours. Within this framework, the correlational component was used to measure the association between training load and academic performance. In contrast, the comparative component enabled the researcher to test significant differences in academic performance between student-athletes with high and low training hours, as well as differences in class attendance rates between student-athletes and non-athletes. The design relied on the systematic collection of numerical data from institutional records and standardized self-report measures, thereby allowing the use of inferential statistics to generate objective, testable, and data-driven conclusions. Overall, the selected research design provided a rigorous methodological framework for assessing the academic implications of athletic time demands and for generating empirical evidence to guide school-based interventions and policy decisions regarding student-athlete support systems.

2.2 Participants

The study comprised 300 respondents from Dagupan City National High School during Academic Year 2025–2026, including officially recognized student-athletes from various teams and competitive levels, as well as a corresponding comparison group of non-athlete students drawn from comparable academic programs. Their inclusion was methodologically necessary because the study examined not only differences in academic performance between student-athletes with high and low training hours, but also differences in class attendance rates between student-athletes and non-athletes. Student-athlete participants were selected through purposive sampling to ensure adequate representation of those exposed to varying levels of weekly training load, particularly the high- and low-training-hour categories identified through preliminary data from coaches or the athletic director. In contrast, the non-athlete comparison group was selected through convenience sampling from non-athletic, co-educational academic

programs to provide a baseline for academic engagement and attendance. The sample size was determined to provide sufficient statistical power for the comparative and correlational analyses. At the same time, all participants were included only after informed consent was obtained and ethical safeguards for anonymity and confidentiality were strictly observed.

2.3 Instrumentation

The study employed two complementary research instruments to generate both objective institutional data and self-reported behavioral data relevant to the investigation of training load and academic functioning among student-athletes. First, the researcher used official institutional data retrieval forms, duly approved by the Registrar's Office and the Athletic Department, to extract the participants' Academic Performance Scores (CGPA/TGPA) and Academic Class Attendance Rates, thereby ensuring that the core dependent variables were measured through verified school records rather than respondent recall. Second, the study utilized a standardized, validated self-report questionnaire to obtain data not ordinarily available in institutional databases, particularly the respondents' weekly training hours and time management skills. The questionnaire included a section that captured the total time devoted to practice, conditioning, and competition. It also incorporated a recognized time-management measure, identified in the thesis as the Time Management Behavior Scale (TMBS) or a similar validated subscale, to quantify the participants' perceived ability to organize and regulate competing academic and athletic demands. The combined use of documentary records and a structured survey instrument strengthened the study's methodological rigor by integrating objective performance indicators with psychometrically grounded self-report data, thereby providing a more comprehensive basis for analyzing the academic implications of athletic training demands.

2.4 Data Analysis

The study employed a quantitative data analysis framework using the Statistical Package for the Social Sciences (SPSS) Version 28, which enabled the systematic analysis of numerical data gathered from institutional records and standardized self-report instruments. Descriptive statistics, specifically mean, standard deviation, and frequency, were first computed to summarize the respondents' profiles and characterize the central variables of the investigation, including academic performance, attendance rate, training hours, and time management skills. To test differences between groups, the study used the Independent Samples t-test, particularly in comparing the academic performance of student-athletes with high versus low training hours and the attendance rates of student-athletes versus non-athletes. To determine the magnitude and direction of association between weekly training hours and academic performance, the study employed the Pearson Product-Moment Correlation Coefficient (Pearson's r). All hypotheses were tested at the 0.05 level of significance, allowing the researcher to establish whether the observed differences and relationships were statistically meaningful. Overall, the adopted statistical procedures provided a rigorous and objective basis for interpreting the effect of training load on student-athletes' academic outcomes and for generating evidence-based conclusions relevant to school policy and intervention planning.

3 Results

The results of the study clearly showed that training load was associated with differences in academic performance among student-athletes. Those classified under low training hours obtained a higher mean academic performance score (M = 3.12, SD = 0.35) than those under high training hours (M = 2.85, SD = 0.42). This descriptive pattern indicates that as athletic demands intensified, academic output tended to decline. The finding suggests that the heavier commitment required by extensive weekly training may reduce the time, energy, and cognitive

focus available for academic tasks, thereby placing high-load student-athletes at greater scholastic risk.

The inferential analysis further strengthened this difference. The Independent Samples t-test revealed a highly significant difference in academic performance between the two training-load groups ($t = -5.89$, $p < 0.001$), leading to the rejection of the null hypothesis. In substantive terms, this result confirms that the gap in academic performance was not due solely to chance. Rather, the quantity of weekly training hours emerged as a statistically meaningful factor in shaping academic outcomes. The results, therefore, support the study's central proposition that excessive athletic time commitment can adversely affect school performance when the competing demands of training and academics become difficult to reconcile.

The correlational findings likewise reinforced this conclusion. The study found a moderate negative correlation between training hours per week and academic performance score ($r = -0.385$, $p < 0.001$), indicating that as training hours per week increased, academic performance tended to decrease. This is an important result because it moves beyond group comparison and demonstrates a measurable inverse relationship between the two variables across the sample. The strength and direction of the correlation suggest that training load is not merely associated with isolated academic difficulty but functions as a broader academic risk factor among student-athletes in the study setting.

Another important result concerned time management skills. Interestingly, student-athletes with high training hours reported a higher mean Time Management Skills Score ($M = 78.55$, $SD = 6.12$) than those with low training hours($M = 75.10$, $SD = 7.98$), and this difference was also statistically significant ($t = 3.15$, $p = 0.002$). This indicates that greater athletic involvement may foster stronger self-reported organizational skills; however, these skills were insufficient to offset the negative academic consequences of excessive training demands. Thus, the findings suggest that while high-load athletes may become better at time management, the cumulative burden of fatigue, pressure, and reduced study opportunities still outweighs the potential benefit of improved scheduling behavior.

Finally, the study showed that academic class attendance was significantly lower among student-athletes than among non-athletes. The mean attendance rate of student-athletes was 4.5% lower, and the difference proved highly significant ($t = -4.20$, $p < 0.001$). This finding points to attendance as a likely mechanism through which training demands weaken academic performance. Missed classes due to training schedules, competition, and travel reduce direct engagement with lessons, classroom discussions, and instructional guidance. Taken together, the results portray a consistent pattern: higher training hours were linked with lower academic performance, a significant decline in attendance, and only partial compensation through stronger time management skills, thereby justifying the need for structured school-based interventions to help student-athletes maintain balance between academic and athletic responsibilities.

4. Discussion

The present study found that student-athletes with high training hours obtained lower academic performance scores than those with low training hours, and that training hours were moderately and negatively correlated with academic performance. This pattern is consistent with current dual-career literature, which shows that success in academics and sport is strongly shaped by training schedules, competitions, travel demands, and the institutional conditions surrounding them. It is further supported by Wang et al. (2024), who reported that lower study and training hours predicted better sleep quality among dual-career collegiate badminton athletes, and by Xu et al. (2025), who found that athlete burnout significantly predicted academic burnout, with sleep quality acting as part of the explanatory pathway. Taken together, these studies corroborate the present results by suggesting that excessive training load does not simply reduce

available study time; it also depletes recovery, heightens fatigue, and increases the likelihood that athletic strain will spill over into academic functioning.

A second important finding of the study was that student-athletes posted significantly lower class attendance rates than non-athletes, with a 4.5% attendance gap. This result is especially important because attendance is one of the concrete mechanisms through which training load affects scholastic outcomes. Ha et al. (2024) found that class attendance had a significantly positive effect on academic performance, with a one-standard-deviation increase in attendance associated with a 0.08-standard-deviation increase in performance. De Maio et al. (2025) likewise identified the absence of flexible programmes and exams, along with logistical barriers such as distance between sport and education spaces, as recurring obstacles in student-athletes' dual-career experience. In this light, the attendance deficit observed in the present study should not be treated as a secondary issue. It is better understood as a direct academic risk pathway: when training and competition reduce classroom presence, they also reduce access to instruction, peer interaction, clarification, and feedback, all of which support achievement.

The study also produced a more nuanced result: student-athletes with high training hours reported significantly better time management skills, yet they still achieved lower academic performance than the low-training group. This partially aligns with Fu et al. (2025), who found that time management positively predicted study engagement and also operated indirectly through self-control and reduced mobile phone dependence. It also aligns with Howard et al. (2025), whose scoping review of high school-aged aspiring athletes emphasized that personal skills matter, but that support systems from educational and sport organizations are equally important. The present study, therefore, contributes an important refinement to the discussion: time management remains beneficial, but it becomes insufficient when training load becomes too heavy. In other words, self-regulation can moderate strain, but it may not fully overcome the academic costs of sustained fatigue, reduced attendance, and limited recovery.

The practical implications of the findings are therefore well justified. The study's proposed actions—training-load thresholds, time-management translation programs, academic flexibility, and stronger coach-faculty communication—are strongly supported by recent literature and policy. De Maio et al. (2025) note that structured tutorship and peer-to-peer support can form a valid network for dual-career athletes, while DepEd Order No. 022, s. 2025 explicitly frames school sports as an extension of formal learning that should support learners' academic pursuits and holistic development. From this, it is reasonable to infer that schools cannot assume sports participation will remain educationally beneficial on its own; they must actively regulate load, protect recovery, and compensate for missed instruction. Thus, the present study does not argue against school sports. Rather, it demonstrates that sport becomes educationally sustainable only when deliberate academic protections and institutional support balance training demands.

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