

Physical Activity Participation and Academic Stress of Senior High School Students in Philippine College of Criminology

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ABSTRACT: Physical activity has been known for a long time as a key element of overall health, with widespread research pointing to its advantages in physical and mental well-being. The motivation for this study comes from real classroom experience in the Philippine College of Criminology high school department. Observations have been made that students attend and engage more in Physical Education (PE) classes than in other classes. PE is even the sole subject that students pass in some instances because they are meeting participation requirements. Such behaviors prompted inquiry into the possible advantages of physical activity outside of academic performance—i.e., its function in stress relief. Globally, the pressure of academic performance on students has been recognized as a significant stressor, especially among adolescents. According to the World Health Organization (2021), academic stress is one of the leading causes of mental health challenges in young people, with effects ranging from anxiety, depression, sleep disturbances, to reduced academic performance. Physical activity is widely acknowledged for its benefits in stress relief and overall well-being. Academic stress is a persistent issue among senior high school students, often resulting in mental health concerns and impaired academic performance. While international literature supports the connection between physical activity and reduced stress, limited local research exists that specifically examines this relationship among senior high school students in the Philippines.

This study aimed to determine the relationship between physical activity participation and academic stress among senior high school students at the Philippine College of Criminology during the school year 2024–2025. A descriptive correlational research design was used. Data were gathered from 337 senior high school students using a validated survey questionnaire measuring physical activity participation (frequency, intensity, duration, type, and motivation) and academic stress (academic workload, time management, and personal/social factors). Statistical analyses included descriptive statistics, t-tests, ANOVA, and Pearson's correlation. The key findings, the majority of students engaged in moderate intensity physical activities, mostly through routine tasks. Academic stress levels were moderate to high, with academic workload and time management as the primary stressors. A significant inverse relationship was found between physical activity and academic stress. Intrinsic motivation was the strongest driver for student participation in physical activity. Findings support the development of school-based programs that incorporate physical activity to alleviate academic stress. The proposed Physical Activity for Academic Stress Reduction (PAASR) plan offers a student-centered, evidence-based intervention for enhancing academic performance and mental health.

KEYWORDS: Physical Activity Participation, Academic Stress, Senior High Student, and Proposed Intervention plan.

INTRODUCTION

Physical activity has been known for a long time as a key element of overall health, with widespread research pointing to its advantages in physical and mental well-being. In senior high school students, academic stress is a common phenomenon, tending to have adverse effects like burnout, anxiety, and reduced academic performance (Pascos et al., 2020). With these problems in mind, physical activity participation appears to be one possible means to counteract stress and improve students' overall well-being. This research investigates the connection between participation in physical activities and academic stress among senior high school students of the Philippine College of Criminology.

The motivation for this study comes from real classroom experience in the Philippine College of Criminology high school department. Observations have been made that students attend and engage more in Physical Education (PE) classes than in other classes. PE is even the sole subject that students pass in some instances because they are meeting participation requirements.

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Such behaviors prompted inquiry into the possible advantages of physical activity outside of academic performance—i.e., its function in stress relief.

Studies have proven that physical activity is associated with reduced stress levels and enhanced cognitive ability. For example, Biddle et al. (2019) conclude that students who are physically active on a regular basis have reduced perceived stress levels and enhanced mood. Likewise, Li et al. (2021) note that exercise initiates physiological reactions, including the release of endorphins and reduced cortisol levels, which ease stress. These findings are consistent with evidence that students who are actively involved in PE lessons can have academic stress alleviation, potentially resulting in an improved learning environment.

In recent years, there has been an increasing interest in understanding the relationship between physical activity participation and academic stress, particularly among senior high school students. Physical activity refers to any bodily movement that requires energy expenditure, including activities such as sports, exercise, walking, and recreational activities (Brock et al., 2021). Academic stress, on the other hand, pertains to the psychological strain experienced by students due to academic demands, such as exams, assignments, and performance expectations (Park et al., 2020). This study aims to explore the impact of physical activity on the academic stress levels of senior high school students.

Physical activity can be categorized into various forms, including aerobic exercises (e.g., running, cycling), strength training (e.g., weight lifting), and recreational activities (e.g., playing sports, dancing). Studies have shown that regular participation in physical activity offers numerous benefits, including improved physical health, better mental well-being, and enhanced academic performance (Morris et al., 2021). It is widely recognized that engaging in physical activity can help mitigate stress by enhancing mood and reducing anxiety, which may be especially beneficial for students facing academic pressures (Alhassan et al., 2020).

Academic stress is a prevalent issue among high school students, especially in senior years when the pressure to perform academically intensifies. The stressors include deadlines, competitive academic environments, and the looming threat of college admissions (Lim et al., 2022). Academic stress has been associated with negative outcomes, including sleep disturbances, burnout, and a decline in mental health (Choi & Kim, 2019). Research indicates that stress can hinder cognitive functioning and may result in lower academic achievement (Zhang et al., 2020).

This study contributes to existing literature by focusing on the senior high school demographic, which has been underexplored in terms of the relationship between physical activity and academic stress. While previous research has shown that physical activity can alleviate stress (López-Valenciano et al., 2021), there is a limited body of knowledge on its specific impact on academic stress among students in their final years of high school. The results of this study were significant for educators, school administrators, and mental health professionals, providing evidence-based recommendations to incorporate physical activity into school routines as a strategy for reducing academic stress. Additionally, this research could inform policies on student well-being and mental health, particularly in academic settings where stress levels tend to peak.

Despite the growing recognition of the importance of physical activity for mental health, there is a noticeable gap in research focusing on senior high school students, particularly in the context of academic stress. Most studies either focus on younger students or university-level individuals, leaving a gap in understanding how physical activity can specifically benefit senior high school students (Santos et al., 2023). By addressing this gap, this study was providing valuable insights that could inform future interventions tailored to this unique group.

Globally, the pressure of academic performance on students has been recognized as a significant stressor, especially among adolescents. According to the World Health Organization (2021), academic stress is one of the leading causes of mental health challenges in young people, with effects ranging from anxiety, depression, sleep disturbances, to reduced academic performance. These stressors are often exacerbated by societal expectations, the competitiveness of educational systems, and the transition from adolescence to adulthood. As educational demands intensify in many countries, students often experience heightened stress, particularly those preparing for higher education and the workforce.

Physical activity has been proposed as an effective coping strategy to mitigate the negative effects of academic stress. Studies show that physical activity can serve as a buffer against stress by promoting the release of endorphins, improving mood, and enhancing cognitive function (Brock et al., 2021; López-Valenciano et al., 2021). Research conducted in several countries such as the United States, Canada, and the United Kingdom has highlighted the positive relationship between physical activity participation and reduced stress levels among students (Morris et al., 2021). Furthermore, physical activity has been shown to enhance resilience, boost self-esteem, and help adolescents manage anxiety, making it a critical component in supporting students' mental health.

In the Philippines, academic stress is also a significant issue among students. According to the National Youth Commission (2020), Filipino students face considerable stress due to academic pressures, family expectations, and societal challenges. The

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rigorous demands of school, including examinations, academic deadlines, and performance evaluations, often contribute to a high-stress environment. This stress is compounded by the added pressures of extracurricular involvement, the struggle to balance studies with personal life, and the increasing expectation to excel in standardized tests, particularly with the transition to senior high school.

Recent studies in the Philippines have shown that academic stress is a pervasive issue, particularly in the senior high school (SHS) segment. A study by Sison and Encabo (2021) revealed that Filipino SHS students face significant stress, primarily due to the demands of preparing for tertiary education and their future careers. This stress has been linked to a range of psychological problems such as anxiety, depression, and sleep deprivation, with long-term consequences on students' well-being and academic success.

Physical activity has increasingly been recognized as an essential intervention to address these challenges. The Philippine Department of Education (DepEd) promotes physical education and health programs within schools, recognizing the role of physical activity in improving students' physical and mental health. A study by Gregorio et al. (2020) highlighted that Filipino students who engage in regular physical activity experience improved mental clarity, reduced stress, and enhanced overall well-being.

In the context of SHS students in the Philippines, academic stress has become an acute issue due to the intensified curriculum under the K-12 program. According to Tan (2021), the transition from junior high school to senior high school involves an increase in academic workload, which often leads to heightened stress among students. This pressure is compounded by the challenges of preparing for college admissions, entrance exams, and future career decisions, especially given the uncertainties that accompany post-graduation paths.

In the Philippine College of Criminology, students in senior high school were commonly seen performing various types of physical activity as part of their regular daily activities, especially walking, commuting, and traveling to and from school. These everyday activities, though not necessarily structured or sporting in nature, were routine forms of physical activity that tended to be disregarded in classroom discussions. Observations of classrooms indicated that students in most cases were found to show more energy and interest in Physical Education (PE) classes than in other subjects. In certain cases, students have been known to pass all their classes except for PE because of their intensive participation in PE classes. Such a trend directed interest towards whether physical activity could play a role as an adaptation for the academic difficulties experienced by the students.

Hence, the research in this paper sought to identify the correlation between physical activity involvement and academic stress among senior high school students in the Philippine College of Criminology. By examining students' physical activity practices—frequency, intensity, time spent, type, and motivation—and their reported stress levels, the research attempted to provide relevant insights into the potential role that physical activity may play as a useful stress management strategy. The outcomes were to assist in developing student-centered support programs and interventions that enhance both physical well-being and academic resilience.

METHODS

This Chapter identifies the tools and the outline of approaches to be used for the collection and treatment of data necessary to complete the study. It includes presentation of research design, respondents, research instrument, procedure for collection of data and statistical analysis.

Research Design

The research design is descriptive-correlational. This is appropriate for the study since it was allowed the researcher to describe the demographic profile of the respondents, the level of participation of the respondents in physical activity, and the level of academic stress they experience. The correlational aspect also enables the study to look at relationships between variables—the association between the participation in physical activity and the level of academic stress.

Descriptive-correlational research is widely recognized for its suitability in studies aiming to explore relationships among naturally occurring variables without manipulation or control. According to Creswell and Creswell (2020), this design is effective in identifying trends and relationships, making it a robust choice for educational and behavioral research. In addition, Subedi (2020) underlines that correlation studies are critical in understanding the interaction of variables in real-life situations, especially in education where various factors simultaneously impact outcomes. It was enabling a thorough analysis of the interaction between participation in physical activity and academic stress, which are influenced by multiple demographic factors.

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Population and Sampling

The population of this research are all senior high school students who are already enrolled in Philippine College of Criminology in Sta. Cruz, Manila, under School Year 2024–2025. There are 2,141 students of this population distributed as 600 Grade 11 students and Grade 12 students with 1,541 students.

Since the population was immense, the researcher used Slovin's formula, which is also one of the most popular formulas used to determine a statistically representative sample, to determine the actual sample size. The margin of error was five percent, and on calculation, the required sample size was determined to be 337 respondents.

In order to enable proportionate and fair representation of the two-year levels, the sample was proportionately distributed according to the number of students by year level. As a result, 94 respondents were selected from Grade 11 and 243 respondents from Grade 12, which represents the total number of 337 respondents. The proportionate sampling allows the opinions of both year levels to be represented fairly and accurately in the study.

The distribution of respondents in the study based on their grade level. Out of a total population of 2,141 senior high school students at the Philippine College of Criminology, a sample of 337 students was selected to participate in the research. Among these respondents, 94 students or 27.9% came from Grade 11, while 243 students or 72.1% were from Grade 12. This indicates that the majority of the respondents in the study were Grade 12 students, comprising more than two-thirds of the sample.

Respondents of the Study

The respondents of this study are the senior high school students from the Philippine College of Criminology, particularly those who were enrolled in Grade 11 and Grade 12 in the academic year 2024–2025. The researcher used random sampling to ensure an unbiased selection process while maintaining the validity and reliability of the data.

The researcher has made sure that students from all strands are given a fair chance of being part of this study, because the senior high school population also includes students from different academic strands: Humanities and Social Sciences (HUMSS), Accountancy, Business, and Management (ABM), Science, Technology, Engineering, and Mathematics (STEM), and General Academic Strand (GAS).

To ensure efficient data collection, a Google Forms-survey questionnaire was administered. This allows for the convenience of respondents in filling out their survey while still achieving quality and completeness in gathered data.

Research Instrument

To collect relevant data for this study, the researcher was used a self-made survey questionnaire, which is systematically divided into three main sections to address the study's objectives effectively.

The first section is called Demographic Profile. The objective is to gather essential background information from the respondents in relation to their age, sex, academic strand, and year level. These helps provide contextual understandings of respondents' characteristics to analyze further, considering a better relationship between the participation in physical activity and the experience of academic stress.

The PAP section deals with the physical activity participation. It is concerned with the participation level of respondents. This part of the questionnaire tries to cover frequency, intensity, time duration, and motivational levels for engaging in physical activities. Questions were designed based on the standardized physical activity participation guidelines to suit the experiences of the respondents, senior high school students.

The third part, Academic Stress (AS), deals with assessing the level of academic stress faced by the respondents. Items falling under this category are categorized into three major headings: academic workload, time management, and personal and social factors. For purposes of reliability and validity, the items under this section are borrowed from validated measurement scales for academic stress. This structured approach would clearly and systematically evaluate the factors that contribute to academic stress among senior high school students.

The use of a Self-made survey questionnaire by this study would ensure that data collected is comprehensive, reliable, and relevant to the research objectives, thereby giving valuable insights into the relationship between participation in physical activity and academic stress among senior high school students.

Validation

The research instrument was validated, ensuring its reliability and accuracy. For content validity, a questionnaire was reviewed by three experts in the fields of education, physical activity, and psychology from Universidad de Manila, National University, and the University of Perpetual Help System Delta. For the information and feedback, they provided, their expertise

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had not only helped but also guided how their feedback was adjusted to refine and enhance the questionnaire's clarity, relevance, and comprehensiveness.

To further ensure the reliability of the instrument, a pilot test was conducted with 20 respondents who share the same demographic characteristics as the target population but were not included in the main study. The internal consistency of the questionnaire was then measured using Cronbach's alpha, aiming for an acceptable reliability coefficient of 0.80 or higher. This ensured that the instrument was both statistically reliable and contextually appropriate for assessing physical activity participation and academic stress among senior high school students.

Data Gathering Procedure

The researcher of this study ensures the efficient, systematic collection of data by applying a structured methodology consisting of few key steps for the maintenance of validity, reliability, and even ethical integrity to the research at hand.

Permission and approval are sought from the administration of the Philippine College of Criminology before commencing the study. A formal letter was submitted requesting authorization to conduct the study and distribute the survey questionnaires among the high school students. Without such permission and approval by the institution, the research was guaranteed to be within ethical considerations and institutional policies.

With this, the instruments preparation followed. The questionnaire of the survey had been pre-tested through expert validation by experts from Universidad de Manila, National University, and the University of Perpetual Help System Dalta on 20 respondents in a pilot test. This was augmented with Cronbach's alpha analysis to ensure the questionnaire was validated within the standards to be passed for clarity, reliability, and accuracy before distribution.

Once finalized, the distribution of questionnaires was coordinated carefully. To avoid any disruption of academic activities, the survey was administered during free periods of students. Instructions were provided to the respondents clearly, highlighting confidentiality and voluntary participation in the study.

The collection of the responses was efficiently done. All the completed questionnaires were screened for completeness and accuracy before the preparation of the data analysis. This ensured the validity, reliability, and representation of the senior high school students' population during the study to support the research objectives.

Statistical Treatment of Data

To gather the desired data, the researcher was utilizing the questionnaires via Google forms as the main instrument of the research. The 4 Likert-scale is employed in the research instruments to determine the frequency of the level of participation in physical activity and academic stress of senior high school students at the Philippine College of Criminology. This was used for the pre-assessment to draft a basis for a proposed intervention plan or activity related to the physical activity participation and academic stress.

The data collected was treated and interpreted using the 4 Likert-scale. The frequency, percentage, weighted mean, analysis of variance, and Pearson correlation of the collection of the data was analyzed.

Frequency Counts and Percentage – These are used in the analysis of the demographic profile of the respondents (SOP 1). This statistical tool summarizes categorical data such as age, sex, academic strand, and year level (Babbie, 2020).

Weighted Mean – Applied to determine the level of participation in physical activity (SOP 2) and the level of academic stress (SOP 3). This method calculates the average response to items from a survey questionnaire. It assigns different weights to varying responses (Reid, 2019). The researcher used the 4-Point Likert Scale. The following below were the scale, range scale, and verbal interpretation used in this study.

Analysis of Variance (ANOVA) – It is used to test if there are significant differences in the level of participation in physical activity when respondents are grouped according to their demographic profile (SOP 4). ANOVA is appropriate for comparing means across multiple groups (Field, 2020).

Pearson Product-Moment Correlation Coefficient (Pearson r) - This is used to analyze the relationship between the level of participation in physical activity and the level of academic stress faced by the respondents (SOP 5). It measures the strength and direction of the linear relationship between the two variables (Cohen et al., 2021).

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RESULTS

Table 6.5. The significant relationship between the level of participation in physical activity and academic stress according to Motivation for participation.

Level of Participation in Physical Activity	Level of Academic Stress	R value	N	p-value	Remarks	Decision
Motivation for Participation	Academic Workload	0.301	348	0.000	Significant	Reject Ho
	Time Management	0.247	348	0.000	Significant	Reject Ho
	Personal and Social Factors	0.220	348	0.000	Significant	Reject Ho

Table 6.5. Shows the computed probability values, all of which were lower than the significance level of 0.05, indicate that the null hypothesis was rejected. This suggests a statistically significant relationship between the level of participation in physical activity—specifically in terms of motivation for participation—and the level of academic stress.

The significant relationship between participation in physical activity and academic stress necessitates the incorporation of organized exercise programs within academic institutions. There is a need for schools to promote individual and team physical activities as a measure to improve student wellbeing. Additionally, if educators understand students' reasons for participating in physical activity, they were able to develop more effective interventions that not only promote participation but also enhance stress-relief benefits.

This result is consistent with earlier studies. Dela Cruz and Ramos (2021) cited that student who participated in team sports had lower levels of stress, which they explained was due to social support and relaxation from group activity. Likewise, De Guzman and Reyes (2022) cited that physical exercise reduces stress by inducing endorphin release and lowering cortisol levels, which are both key physiological indicators of stress. These studies support that physical exercise, especially one that is intrinsically motivated or social in nature, is a natural antidote to academic stress.

Table 6.6. Summary of the Composite Mean

Indicators	Mean	Verbal Interpretation
1. Frequency	2.77	Often
2. Intensity	2.83	Often
3. Time Duration	2.77	Often
4. Type	2.85	Often
5. Motivation for Participation	3.15	Often
General Assessment	2.87	Often

Legend:

3.25 - 4.00 Always	2.50 - 3.24 Often
1.75 - 2.49 Sometimes	1.00 - 1.74 Never

Table 6.6 shows the Summary of Level of Physical Activity. The generated general composite assessment means of 2.87 was interpreted as Often. The indicator "Motivation for Participation" has the highest mean, which is 3.15 and is interpreted as Often. The second highest mean, the indicator "Type" which is 2.85 and is interpreted as Often. Meanwhile, the indicators "Frequency and Time Duration" has the lowest mean of 2.77 and is interpreted as Often.

This trend concurs with contemporary research highlighting the key function of motivation in participation in physical activity. Kjønniksen et al. (2023) conducted a study that recognized psychological and physical state as the most common motives for participating in physical activity, followed closely by enjoyment. The research further indicated that though motives such as

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competition and other people's expectations were less common, the overwhelming focus on intrinsic motivations reflects the key role played by personal fulfillment in maintaining physical activity habits.

In addition, the lower mean score for "Frequency and Time Duration" indicates possible hindrances to regular participation, e.g., time limitations or other responsibilities this was fall in time management. Dr. Carly Wood of the University of Essex highlights that the inclusion of enjoyable aspects in exercise programs can improve adherence and overall health outcomes. She adds that exercising outdoors, for example, not only makes it more enjoyable but also has a huge impact on mental and physical well-being, quite possibly eliminating the problems of frequency and duration.

These findings indicate that although students show strong motivation for taking part in sports, this is not always manifested in terms of regular or sustained participation. The high mean in the "Motivation for Participation" indicator indicates that students are mostly motivated by intrinsic reasons like enjoyment, personal satisfaction, or health awareness. Nonetheless, the lower mean levels of "Frequency and Time Duration" suggest possible difficulties in maintaining regular involvement, possibly owing to constraints such as time availability, schooling demands, or scarcity of effective physical activity opportunities. This disparity points to the necessity for optimally designed interventions that not only foster intrinsic motivation but also confront extrinsic barriers to regular activity. Schools and after-school programs need to place an emphasis on making active play enjoyable, accessible, and convenient to fit into students' time constraints and interests. Further, the incorporation of teaching time management and informing the benefits of continued physical activity to mental and physical well-being might inspire students to include exercise in their regular daily regimen. By embedding motivation in encouraging environments and supportive systems, persistent and sustained physical activity patterns among children can be nurtured well.

Table 6.7. Summary of the Composite Mean

Indicators	Mean	Verbal Interpretation
1. Academic Workload	2.96	Agree
2. Time Management	3.01	Agree
3. Personal and Social Factors	2.75	Agree
General Assessment	2.91	Agree
Legend:		
3.25 - 4.00 Strongly Agree	2.50 - 3.24	Agree
1.75 - 2.49 Disagree	1.00 - 1.74	Strongly Disagree

These results support previous literature that highlights the profound effect of academic workload and time management on stress levels among students. Misra and McKean (2020) revealed in one of their studies that inefficient time management leads to increased academic stress in university students. In another study, Wang et al. (2024) established that academic workload ranked top as a stressor of students' mental health.

In addition, Table shows a high correlation between frequent physical exercise and decreased levels of stress, especially among students with heavy academic loads. The finding is supported by Liu et al. (2024), which found that physical activity has positive effects on stress coping and mental well-being in adolescents. Further, Zhang et al. (2024) showed that frequent physical exercise is linked to decreased depression, anxiety, and stress levels in university students.

Taken together, these studies highlight the significance of efficient time management and regular exercise in reducing academic stress, thus promoting students' general well-being and academic achievement.

These findings have important implications for institutional interventions that seek to enhance student well-being. Encouraging effective time management skills and incorporating regular exercise into student lifestyle could be major interventions. Universities may want to include time management workshops and ease access to recreation facilities as part of a larger mental health and academic support infrastructure. By working on both the psychological and physiological aspects of student stress, these measures could help create healthier, more productive academic environments.

DISCUSSION

This study aimed to examine the level of physical activity participation and academic stress among Senior High School students at the Philippine College of Criminology for the School Year 2024–2025. The research explored how various factors such

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as age, sex, academic strand, and year level influence students' engagement in physical activity, as well as the extent to which they experience academic stress related to workload, time management, and personal/social factors.

Through the use of structured questionnaires, the study collected quantitative data from selected students to assess the frequency, intensity, duration, and type of physical activities they participated in, along with their motivations. At the same time, the research measured the levels of academic stress they encountered in their academic life. Statistical tools were used to analyze differences and relationships between physical activity and academic stress across different demographic profiles.

The findings of the study provide significant insights into how physical activity may serve as a buffer against academic stress, and they serve as the foundation for proposing relevant intervention programs tailored to the needs of Senior High School students in a criminology-focused educational setting.

The researcher studied the physical activity participation and academic stress of the Senior High School in Philippine College of Criminology.

1. The study showed that most of the respondents were 18–19 years old (46.6%). The gender distribution was almost equal (50.7% male, 49.3% female). The largest number of students came from the Humanities and Social Sciences (HUMSS) strand (61.1%), and most of them lived in Grade 12 (69.4%). This kind of profile suggests that the respondents are at or near the later stage of senior high school life and hence should be struggling with increasing scholastic burdens and stress thanks to graduation time and college life preparation.
2. The findings indicated that students frequently engaged or practiced moderate intensity physical activity most commonly in the way of routine daily activities, e.g., walking, travel to and from school, and household chores. With regard to intensity, all activities were primarily of moderate category. On average, respondents participated in physical activity for over 30 minutes on each occasion. Unplanned, casual categories of activity were common, with little participation in formal sport or structured physical fitness activity. Motivationally, students were mostly driven by intrinsic motives such as relief from stress, enjoyment, and health benefits with minimal influence of extrinsic factors such as rewards or social pressure.
3. The majority of the students experienced moderate to severe levels of academic stress. Academic workload, in the form of assignments, projects, and exam preparation, was the most prevalent stressor. Time management between schoolwork and non-school life was also highly rated as a stressor. While personal and social factors such as family expectations and peer relationship did contribute to stress, they were less severe than academic-related sources of stress.
4. Statistical analysis revealed principal differences in physical activity participation based on demographic indicators. Younger students (Grade 11 students) reported higher levels of physical activity compared to older (Grade 12) students. Differences were observed based on sex, academic strand, and year level.
5. The findings revealed that Grade 12 students reported significantly higher levels of academic stress than Grade 11 students. Female students reported slightly higher levels of stress than male students. Students enrolled in HUMSS also reported higher levels of stress than students in other strands.
6. The findings were confirmed a strong negative correlation between physical activity participation and level of stress among academics. Those with more physical activity participation, particularly the intrinsically motivated ones, had lower levels of academic stress. Intensity, duration, and frequency of physical activity all had inverse relationships and negative correlation with markers of stress.
7. Based on the outcomes, the author recommended the Physical Activity for Academic Stress Reduction (PAASR) Plan. This includes designed movement breaks within class, fitness clubs led by peers, structured recreational and aerobic activities, wellness workshops, and an annual Wellness and Sports Fest. The intention of the PAASR Plan is to provide fun and light-intensity body movement to daily life in a manner that incorporates physical activity into stress reduction and well-being intervention.

CONCLUSIONS

Based on the findings, the following conclusions were drawn:

1. The demographic profile of student, particularly being Grade 12 and from the HUMSS strand, may be a factor in the fact that they are likely to be more susceptible to academic stress. As these students, being closer to graduating into tertiary education or joining the workforce, the workload and academic stress are naturally higher.
2. Senior high school students prefer moderate, routine, and intrinsic motivational body movement. Complicated and busy school schedules may deter students from doing structured or time-related activities and moderate and enjoyable movement choices may be more possible and appealing.

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3. Academic workload and time management are the most common reasons for student stress. Such sources of stress can hinder academic and emotional well-being, and therefore must be intervened upon by schools using evidence-based interventions and support services.

4. Physical activity participation is also influenced by demographic variables, including age and academic level of attainment. Grade 12 students are less physically active due to academic pressures. Interventions should therefore consider these demographic nuances to enhance inclusivity and efficacy.

5. Academic stress varies significantly among demographic factors, specifically year level and strand. This suggests the need for differentiated intervention strategies, particularly for Grade 12 students and students in more difficult strands of study such as HUMSS strand. By creating of intervention can fit both of grade levels.

6. Physical activity is a coping mechanism for stress associated with learning. Physical activity is a decisive factor in control of emotions, mental acuity, and resilience to academic distress. Physical activity is therefore an essential complement in helping students manage their mental as well as learning health and well-being.

7. The proposed PAASR intervention provides a practical, student-centered approach to managing academic stress. Integrating movement and wellness practices into school culture, this program can help students maintain balance, enhance mental health, and succeed academically.

RECOMMENDATIONS

In the light of findings and conclusions, the following recommendations were considered important.

1. For Senior High School Students

Senior High School students are encouraged to participate actively in regular physical activities not only as a school mandate but as an individual way of coping with stress. Simple and available kinds of movement like walking, jogging, stretching, or dancing can make a real difference and a substantial impact for both physical and mental well-being. Because the research found that intrinsically motivated students are the ones who gain more, students was need to pick activities that interest them in order to have a consistent effort. They was need to learn time management skills to achieve a balance between studies and physical exercise, which was cut down on stress, enhance concentration and sleep, and eventually help them do their studies and even their personal life better.

2. For Teachers and Academic Advisors

Academic advisors and teachers both are important in nurturing an atmosphere in the classroom that aids in general student development. They are also encouraged to include short, in-class movement breaks or small exercises in the lessons to prevent burnout and enhance focus during learning. Teachers can also recognize students with signs of stress caused by academics and refer them to appropriate school support systems or encourage them to participate in sports. Furthermore, educators should make a healthy example by participating or sponsoring wellness events. Through incorporating physical exercise in the pedagogical and advising fabric, teachers can help students make it a healthy adjustment for academic stress.

3. For School Administrators,

School officials have a strategic option to make policies and programs promoting physical activity as a school-wide mental health initiative. They are urged to implement the Physical Activity for Academic Stress Reduction (PAASR) plan that should include periodic movement breaks, structured aerobic or recreational classes, peer-to-peer fitness clubs, and wellness seminars for the students. School administrators can provide resources and curriculum time for such programs to make them accessible, inclusive, and enjoyable. Furthermore, schools can collaborate with school guidance counselors to conduct time management and stress reduction workshops. Integrating physical education into the school system can significantly enhance student resilience and reduce academic burnout.

4. For Parents and Guardians

Parents and families are great allies in promoting the overall well-being of their children. Parents are invited to encourage and participate in physical activity in the home environment, and promote active lifestyle as family practices. Simple activities like walking together, cycling, or doing sports outdoors can be helpful to bonding and stress relief. Parents should also be involved in school well-being initiatives through attending orientation sessions or seminars that raise awareness on the significance of physical exercise in managing academic stress. Encouragement, resource provision, and a passion for physical health enable parents to create a healthy working environment that supports their children's educational and emotional success. This, in turn, benefits the well-being of the students and supports their academic resilience.

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5. For Policymakers and DepEd Officials

Education policymakers and DepEd decision-makers are recommended to increase physical activity as part of Senior High School curriculum in the overall scheme addressing mental health concerns among students. National and regional policies should mandate mandatory provision for regular exercise classes during school hours, supplemented by school funds for equipment, facilities, and instructor training. Further, school mental health programs should recognize physical activity as a core intervention for academic distress. Through policy support, education administrators can institutionalize health-promoting habits within schools and have them align with the purposes of holistic education, student persistence, and academic achievement.

6. For Future Researchers

Further studies may be conducted to explore the long-term effects of school-based physical activity interventions on students' level of stress and school performance using longitudinal studies. It can also be useful to offer more insight into the different dimensions of academic stress if research scope is extended to other factors—family background, internet use, and socioeconomic status. Comparative studies between Junior High School (JHS) and Senior High School (SHS) students may also clarify the ways in which stress and physical activity vary across stages of development, which could be used to develop more effective and targeted interventions. Following through on this research direction, scientists can help create evidence-based education practices and mental health interventions with diverse populations of students.

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