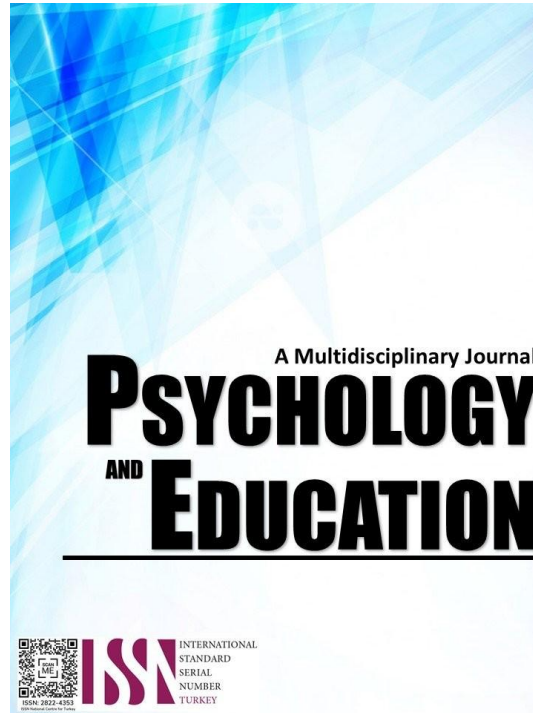


RELATIONSHIP BETWEEN SLEEP QUALITY, LEVEL OF STRESS, AND ACADEMIC PERFORMANCE OF LEARNERS IN A PUBLIC SECONDARY SCHOOL IN GUMACA



PSYCHOLOGY AND EDUCATION: A MULTIDISCIPLINARY JOURNAL

Volume: 55

Issue 2

Pages: 249-259

Document ID: 2026PEMJ5356

DOI: 10.70838/pemj.550210

Manuscript Accepted: 09-22-2025

Relationship Between Sleep Quality, Level of Stress, and Academic Performance of Learners in a Public Secondary School in Gumaca

Charlene N. Gonzales,* Maria Celerina D. Oreta, Melchor B. Espiritu

For affiliations and correspondence, see the last page.

Abstract

This research explored the interaction between sleep quality, level of stress, and academic performance in a public secondary school in Gumaca, Quezon. It sought to determine the degree to which sleep habits and stress states affect the academic performance of the students. The descriptive-correlational research design was employed, with a guide questionnaire as the main data collection tool. The survey respondents were 80 senior high school students, who were sampled using stratified sampling. The outcomes indicated that most students experienced poor sleeping habits, mostly attributable to electronic media exposure prior to bedtime, and reported feeling tired most of the time during the day. About stress, students would often report feeling stressed for reasons of academic deadlines, workload, and mental fatigue. With enough time to cope, most students felt that they were not academically performing optimally. Statistical testing by Spearman's rho correlation concluded that there is a significant correlation between sleep quality and stress, as well as between academic performance and sleep quality. Also, from the data, it was concluded that greater stress is linked with lower grades. According to these results, schools should integrate sleep hygiene and stress management interventions to support students' capacity to improve their well-being and academic achievement. A longitudinal study design would strengthen future research by examining more thoroughly the long-term impact of inadequate sleep and chronic stress on students' academic performance.

Keywords: *academic performance, anxiety, cognitive function, learners, sleep quality, stress level*

Introduction

Sleep is a very important and necessary function that the body and the brain need to have. However, the sleep quality connection with stress and academic performance will be ignored in the literature. The purposes of this study were to evaluate types of sleep and the level of stress in medical students and to examine the links between sleep quality, stress, and academic performance. Students' well-being is dramatically changed by the quality of their sleep, thus being a major contributor to their cognitive abilities, emotional state, and academic success. Notwithstanding, the focal point of academic endeavors and the burden of family obligations are public secondary school students' major sleep quality problems that influence the wrong motivation centered around the family and social distractions. The interconnection between sleep quality and stress level results in a disorderly scene that obstructs the students' abilities to achieve the desired learning outcomes and improve their academic performance. This research work is directed to bridge the gap regarding the relationship of sleep quality, stress level, and success of the students at a public secondary school, focusing on the necessity of adequate rest for the students' successful academic performance.

Stress has become a common issue among students, particularly secondary school students who are struggling to keep up with their studies, meet their extracurricular activities, and handle their personal issues. The principle of stressor, that is, high-stress levels, may reduce sleep quality, thus causing sleepiness and consequently poor academic performance. On the other hand, practicing sleep hygiene has been linked with better memory and problem-solving skills, which are essential to academic excellence and overall focus. Exploring the relationship between these three elements will ultimately bring up the necessary information on how schools can aid students in controlling stress and improving their sleeping patterns, thus enhancing academic outcomes.

Sleep is very important in a child's life, especially in connection to their progress and stress reduction. Young people attending public high schools often face the problem of sleep deprivation as a result of the pressure of school, involvement in extracurricular activities, and personal chores. Poor sleep quality may irreversibly damage memory, concentration, and cognitive functions such as decision-making, which results in poor school performance. In addition to this, a lack of sleep has been found to increase a student's stress levels and thus limit his/her effectiveness while in school. The solution to this issue is learning the connections between sleep quality and student performance. It is important for the development of interventions promoting students' healthy sleep habits.

Stress is one of the major dysfunctional factors of the mental health of secondary school students, as not only their excessive academic pressure, but also peer expectations, and environmental problems strongly contribute to it. Excessive stress may trigger the development of anxiety, depression, or change the learners' focus and motivation. Besides, the research showed that sleep loss is the underlying cause for stress; hence, the vicious cycle of unhealthy work is created that affects the quality of students' education negatively. Therefore, the research on sleep deprivation in relation to stress provides a unique opportunity, particularly in the identification of how they affect the school achievement levels.

Toughly, a lot of facts indicate the enjoyment of quality sleep as a condition for good school results and better educational chances. The facts are, good sleep allows students to look at and remember the information they learned at school without the weakening effect of cognitive dysfunction. However, at present, almost all secondary school learners pay little or no attention to sleep as a result of

religious restrictions and/or are pulled away by too many distractions like late-night programs on their devices. It is not uncommon that students are not getting enough rest, and hence, they are unable to understand, remember, or brainstorm productively about their subjects. The study aims to analyze how sleep quality and stress levels determine the success of students in public secondary schools.

Research Questions

This study aimed to determine the relationship between sleep quality, level of stress, and academic performance of learners in a public secondary school in Gumaca. Specifically, this study sought to answer the following questions:

1. What is the profile of the respondents in terms of:
 - 1.1. age;
 - 1.2. sex;
 - 1.3. grade level; and
 - 1.4. strand?
2. What is the level of sleep quality, level of stress, and academic performance of the learners?
3. Is there any significant relationship between sleep quality and academic performance of the learners?
4. Is there any significant relationship between sleep quality and stress level of the learners?
5. Is there any significant relationship between stress level and academic performance of the learners?

Methodology

Research Design

This study used a descriptive survey method to collect data for the measurement of the relationship between sleep quality, level of stress, and academic performance of learners of selected Grade 11 and Grade 12 of Gumaca Integrated School. The researcher used a survey questionnaire as an instrument. Based on the survey's results, the researcher was able to determine the details of the study.

According to Best and Kahn, the descriptive survey method is concerned with conditions or relationships that exist, practices that prevail, beliefs, points of view, or attitudes that are held, processes that are going on, effects that are being felt, or trends that are developing. This approach is commonly used in social sciences to provide an accurate portrayal of a particular phenomenon or group.

Respondents

The researcher selected 80 students through proportionate random sampling who are enrolled in Gumaca Integrated School in the SY. 2024-2025, and the relationship between sleep quality, level of stress, and academic performance among learners in a public secondary school was the focus of the study. The respondents were composed of 45 students from grade 11 and 35 students from grade 12, with a total of 80 student respondents. According to Kothari, proportionate random sampling, the representation of each stratum is proportional to its occurrence in the total population, increasing the sample's representativeness.

Instrument

The researcher used a standardized questionnaire, "The Pittsburgh Sleep Quality Index (PSQI) which is a widely used self-report questionnaire that assesses sleep quality over a one-month time interval. The PSQI consists of several components that evaluate different aspects of sleep, including sleep duration, latency, disturbances, and overall sleep quality. Responses were measured using a 4-point Likert scale: 4 – Very High (VH), 3 – High (H), 2– Low (L), and 1 – Very Low (VL), for understanding the relationship between sleep quality, level of stress, and academic performance among learners in a public secondary school in Gumaca.

Part I is composed of a demographic profile of the respondents, and Part II is the relationship between sleep quality, level of stress, and academic performance of learners in a public secondary school in Gumaca. To assess stress levels, the study employed the Perceived Stress Scale (PSS), a standardized instrument designed to measure the degree to which individuals perceive situations in their lives as stressful. This tool helped determine the level of stress among learners and how it correlates with their sleep quality and academic performance. The researcher prepared a standardized questionnaire for the respondents, validated by two experts.

To acquire validity and reliability, the instrument was pilot-tested and validated by two experts. To test the internal consistency of the questionnaire using Cronbach's Alpha, a pilot test was conducted at Eastern Quezon College Inc. with 12 respondents. The result is 0.89, which is interpreted as good.

Procedure

Prior to the conduct of the study, the researcher sent a letter of request to the principal of a chosen public secondary school in Gumaca, Quezon, for permission to administer the research tool to the students. Upon acquisition of permission, the researcher conducted the actual data collection.

The questionnaire was given during the students' vacant periods or non-instructional time to avoid disruption of their regular class activities. The respondents were given clear instructions, and sufficient time was provided for them to fill in the questionnaire truthfully and accurately.



The respondents were selected from Grade 11 to 12 senior high school students. A descriptive research design was utilized using standardized instruments like the Pittsburgh Sleep Quality Index (PSQI) and the Perceived Stress Scale (PSS), which were both Likert-type scale-formatted. Academic achievement was collected through their latest general average with appropriate consent.

Data Analysis

In this study, the researcher used statistical measures to treat the collected data. All the data were carefully read and examined for analysis. They were tallied and entered into a master list of the data collection sheet. Percentage and Frequency were used to interpret the profile of the respondents. To test the significant difference between three or more means, the researcher used the Pearson R for a non-parametric test.

Results and Discussion

This section deals with the presentation, analysis, and interpretation of the data. All the data gathered were presented here in tabulated form with corresponding interpretation. The first part described the profile of the respondents in terms of age, sex, and grade level. The second part is the relationship between sleep quality, level of stress, and academic performance of learners in a public secondary school in Gumaca.

Table 1. Frequency and Percentage Distribution of the Respondents According to Age

<i>Age</i>	<i>Frequency</i>	<i>Percentage (%)</i>	<i>Rank</i>
16-17	65	81	1
18-19	15	19	2
20 and above	0	0	3
Total	80	100	

Table 1 shows the frequency and percentage distribution of respondents according to age. The majority of student respondents (81%) are aged from 16 to 17, while 19% are aged 18 to 19. No respondents were reported to be 20 years old and above. This shows that the participants are mainly senior high school students, which is well within the focus of the present study, which includes adolescent sleep quality, stress, and academic performance.

During this age, students are handling a pivotal adolescence phase with heightened scholarly demand, emotional development, and personal identification. Amidst juggling school with personal and societal obligations, aspects such as sleep and stress become more significant. Filipino adolescents, based on Delos Reyes and Garcia (2019), find themselves with greater scholarly expectations, which tend to affect their sleeping patterns and heighten stress levels. This makes them a prime population for studying how physiology and psychology affect learning. By targeting this age range, the research is better placed to pick up on observations at a time when students are acutely attuned to surrounding influences. The combination of sleep deprivation and school-related stress is particularly prevalent throughout these school years, and it is therefore important to know whether and how such influences impact performance. Thus, the age range supports the suitability of the sample and enhances the applicability of the observations to actual school environments.

Table 2. Frequency and Percentage Distribution of the Respondents According to Sex

<i>Sex</i>	<i>Frequency</i>	<i>Percentage (%)</i>	<i>Rank</i>
Male	34	42	2
Female	46	58	1
Total	80	100	

Table 2 shows the frequency and percentage distribution of the respondents according to sex. According to the data, there are more female participants, who represent 58% of the population, compared to males, who represent 42%. This represents a minimal gender disparity, with a greater number of female students compared to male students. This pattern is consistent with general enrollment figures among Philippine public senior high schools, with female students tending to marginally outnumber males. This demographic trend is confirmed by studies of the DepEd, which reported that females tend to have higher retention and participation rates, particularly at the senior high school level.

The sex of respondents is important when analyzing for patterns of sleep and stress because research has indicated that males and females tend to experience and react differently to stress. Alfonsi et al. (2020) state that adolescent girls are likely to score greater levels of stress and are also most at risk of suffering from disruptions in sleep, which consequently influence their performance at school. Thus, knowing the sex distribution of respondents gives meaning when analyzing for variations among their experiences of sleep, stress, and learning performance.

Table 3. Frequency and Percentage Distribution of the Respondents According to Grade Level

<i>Grade Level</i>	<i>Frequency</i>	<i>Percentage (%)</i>	<i>Rank</i>
Grade 11	45	56	1
Grade 12	35	44	2
Total	80	100	



Table 3 is a frequency and percentage distribution of the respondents by grade level. Most of the respondents are in Grade 11 (56%), and (44%) are in Grade 12. This shows that over half of the sample population is from the lower level of senior high school, although there are representatives from both levels.

As students move into senior high school, their schoolwork is more challenging, demanding greater attention, stress control, and mental flexibility. Owens et al. (2017) state that upper-grade students usually experience greater academic stress, which is likely to impact their sleep and level of tension. Grade 12 students, for instance, are usually gearing up for matriculation and future studies or career directions, which is likely to increase their tension and impact their sleeping patterns. While Grade 11 students are gradually adjusting as well to life at senior high, they are also starting to face more challenging learning tasks. This distribution is necessary in determining whether students of various grade levels deal with stress and whether or not the quality of their sleep will affect what they accomplish at school. The balance of the two-grade structure increases the importance of the study since it covers a wide dimension of senior high school life in Gumaca.

Table 4. *Frequency and Percentage Distribution of the Respondents According to Strand*

<i>Strand</i>	<i>Frequency</i>	<i>Percentage (%)</i>	<i>Rank</i>
TVL (HE, Security Service & Peacekeeping)	53	66	1
Academic (STEM & ABM)	27	34	2
Total	80	100	

Table 4 illustrates the distribution of student respondents based on their study strand. The largest, with 66% of the students, are under the Technical-Vocational-Livelihood (TVL) strand, namely Home Economics, Security Service, and Peacekeeping. The other end is comprised of the 34% of the respondents who are under science strands Science, Technology, Engineering, and Mathematics (STEM) and Accountancy, Business, and Management (ABM) combined.

This alignment reflects a high concentration of students with technical and skill-based education, which points to the dominance of the TVL track among the participants. Each learning strand imposes its unique special demands that would affect students' stress levels, sleep, and performance differently. TVL students commonly undergo performance-based, practical training that predisposes them to physical exhaustion. Alternatively, students in streams like STEM and ABM typically struggle with rigorous theoretical subjects in upper levels, problem-solving exercises, and large tests, which lead to mental exhaustion and irregular sleep patterns.

As Cruz and Mendoza (2021) quoted, the type of learning activity of each strand characterizes the type of stress and sleeping habits that students will have. Recurrent displays of skills and measurements of competency may build pressure on TVL students. In contrast, stress caused by understanding concepts and high-stress test pressure may be felt by academic-track students. This strand division provides informative background context on how education paths impact the variables of interest being studied here. It also emphasizes the importance of strand-specific intervention and support mechanisms aimed at addressing students' unique academic and emotional needs in vocational and academic strands in public high schools.

Table 5. *Frequency and Percentage Distribution of the Respondents According to Hours of sleep on an average night*

<i>Hours</i>	<i>Frequency</i>	<i>Percentage (%)</i>	<i>Rank</i>
Less than 4 hours	5	6	5
4-5 hours	24	30	1
5-6 hours	20	25	2
6-7 hours	17	21	3
7-8 hours	10	13	4
More than 8 hours	4	5	6
Total	80	100	

Table 5 shows the percent and frequency distribution of respondents by the number of average hours of sleep. The largest percentage of respondents (30%) reported 4 to 5 hours of average sleep, followed by 25% reporting 5 to 6 hours of average sleep, and 21% reporting 6 to 7 hours of average sleep. A mere 13% of students sleep 7 to 8 hours, which is the suggested number of hours slept by youth.

The results are that a majority of students within this sample are sleeping insufficiently, which would potentially affect either their performance level or stress level. National Sleep Foundation (2020) asserts that adolescents require 8–10 hours of nightly sleep for peak performance, yet all our respondents are coming up short. This is also aligned with Alvaro et al. (2017), who noted that improper sleeping is closely associated with rising stress, decreased concentration, and deteriorating school performance. There is a basic necessity for a description of students' sleeping habits when assessing their performance and mental health. Academic workload, extracurricular activities, and lifestyle are probably responsible for students being notoriously sleep-deprived, according to data. These observations add further impetus to the necessity of studying the impact of sleeping quality on performance and stress, specifically among Gumaca public high school students.



Table 6. *Frequency and Percentage Distribution of the Respondents According to Time they usually go to bed on Weekdays*

Time	Frequency	Percentage (%)	Rank
Before 9 PM	13	16	3
9-10 PM	27	34	2
10-11 PM	29	36	1
After 11 PM	11	14	4
Total	80	100	

Table 6 presents the frequency and percentage of respondents by bedtime on a workday. The students are asleep by 10:00 and 11:00 PM, 36% respectively, and 34% are asleep by 9:00 and 10:00 PM. 16% are asleep at or earlier than 9:00 PM, and 14% are asleep at or later than 11:00 PM.

This pattern indicates that students sleep extremely late on school nights. Sleeping late at night, especially later than 10:00 PM, may be the reason why there are fewer sleeping hours, especially if the students have a morning class routine. This trend is an affirmation of earlier findings that students are not getting enough sleep hours recommended. National Sleep Foundation (2020) indicates that consistent bedtime and earlier bedtime improve cognitive function, mood, and school performance in adolescents. Another research by Alvaro et al. (2017) also confirmed that late bedtime is typically linked with serious stress, low quality of sleep, and poorer performance in school. Having a small percentage of sleepers in its students may be a potentially troublesome situation in terms of time or lifestyle, which may be school-imposed or technological usage. It also substantiates what is pertinent when thinking about the quality of sleep as a crucial parameter compared to stress and performance. It even suggests that intervention among the good sleepers of high school students in Gumaca would enhance psychological well-being as well as performance.

Table 7. *Frequency and Percentage Distribution of the Respondents According to the Difficulty of Falling Asleep*

Difficulty of falling sleep	Frequency	Percentage (%)	Rank
Always (5 or more times per week)	14	17	3
Often (3-4 times per week)	19	24	2
Sometimes (1-2 times per week)	42	53	1
Never	5	6	4
Total	80	100	

Table 7 illustrates how often students experience difficulty sleeping. More than half of the respondents (53%) experience difficulty falling asleep 1 to 2 times a week, 24% experience difficulty often, and 17% experience it nearly every day. Few students (6%) reported that they do not experience difficulty sleeping. These findings are indicative of a strong trend: students experience sleeping difficulties, with close to 94% of them experiencing difficulty sleeping at least occasionally. Inability to fall asleep immediately can result in compromised sleeping quality, which consequently impacts academic performance and increases tension. Beattie et al. (2015) and Alvaro et al. (2017) state that such disruptions in sleeping are closely linked with reduced concentration, mood swings, and lowered academic functioning. This information supports a need for investigation into why students at Gumaca's public secondary schools are having such trouble sleeping, whether because of schoolwork, the use of digital devices at night, or some other reason, and points toward the importance of teaching about sleep hygiene within school health and well-being programs.

Table 8. *Frequency and Percentage Distribution of the Respondents According to Average Academic Performance (GPA or equivalent)*

Average academic performance	Frequency	Percentage (%)	Rank
Outstanding (90-100)	32	40	2
Very Satisfactory (85-89)	42	52	1
Satisfactory (80-84)	6	7	3
Fairly Satisfactory (75-79)	0	0	4
Did not meet expectation (Below 74)	0	0	5
Total	80	100	

DepEd order no.8 s.2015—policy guidelines on classroom assessment for the K-12 basic education program.

Table 8 illustrates the average academic performance in terms of GPA marks provided by the Department of Education. 40% of students scored Very Satisfactory (85–89) and 52% Outstanding (90–100). A mere 7% scored below Satisfactory (80–84). It is noteworthy that no students scored below Fairly Satisfactory or Did Not Meet Expectations, reflecting high academic performance overall.

This movement reflects that even though earlier research has associated poor quality sleep and high to extreme levels of stress, most students are still doing just fine in terms of academics. This may be an indicator, though, of short-term coping mechanisms like cramming, energy, or teacher or family support. As noted by Curcio et al. (2006), chronic poor sleep will ultimately erode even high-achieving students' academic functioning by way of impairment of memory, attention, and emotional control. Worth noting here is that academic achievement in this sample might not yet fully account for the cumulative cost of long-standing sleep and stress issues. Long-term well-being and sustainability in performance still require proactive intervention.



Table 9. *Level of Sleep Quality of the Respondents*

Indicators	Mean	Verbal Description	Rank
1. How many hours of sleep do you get on an average night?	3.19	High	2
2. What time do you usually go to bed on weekdays?	2.53	High	7.5
3. How often do you have difficulty falling asleep?	2.53	High	7.5
4. Do you go to bed and wake up at consistent times every day.	2.41	Low	9
5. How often do you wake up feeling refreshed and rested show.	2.29	Low	13
6. Do you experience frequent interruptions during the night (e.g., waking up unexpectedly)?	2.68	High	5
7. Do you feel excessively sleepy or tired during the day?	2.94	High	3
8. Do you use an electronic device (e.g., phone, TV, computer) within 1 hour of bedtime?	3.49	Very High	1
9. Do you consume caffeine (coffee, tea, soda, energy drinks) within 4 hours before bedtime?	2.15	Low	14
10. Do you engage in relaxation techniques (e.g., deep breathing, meditation) before bed?	2.08	Low	15
11. How often do you wake up due to external factors (noise, temperature, discomfort)?	2.39	Low	11
12. Do you experience leg cramps or tingling in your legs while sleeping?	2.36	Low	12
13. Do you believe your current sleep habits impact your academic or work performance?	2.60	High	6
14. Do you experience memory or concentration problems due to poor sleep?	2.69	High	4
15. How satisfied are you with your overall sleep pattern?	2.40	Low	10
Average Mean	2.58	High	

Legend: Very High (3.25-4.00), High (2.50-3.24), Low (1.75-2.49), Very Low (1.00-1.74).

Table 9 displays the sleep quality level of learners in a public secondary school in Gumaca. The average mean is 2.58, which is verbally interpreted as “high”. As shown in the table, the indicator “Do you use electronic device (e.g., phone, TV, computer) within 1 hour of bedtime” recorded the highest weighted mean of 3.49, which is interpreted as very high. Moreover, it was followed by the indicators “How many hours of sleep do you get on an average night” and “Do you feel excessively sleepy or tired during the day”, which have a weighted mean of 3.19 and 2.94, respectively, and are interpreted as high. On the other hand, the indicator “Do you engage in relaxation techniques (e.g., deep breathing, meditation) before bed” obtained the lowest weighted mean of 2.08, which is verbally interpreted as low. The findings suggest that many students have poor sleep habits. Most of them often use electronic devices like phones or computers before going to bed, which can negatively affect their sleep. While they do get some sleep, it may not be enough or of good quality, as many feel tired during the day. Additionally, only a few students practice relaxation techniques like deep breathing or meditation before bedtime, which could help them sleep better. The results show that students need guidance toward better sleep habits through education and awareness, as their current routines may be affecting their health and school performance.

Santos and Villanueva (2021) found that students in Gumaca who slept less than six hours a night often felt sleepy during the day, had trouble focusing, and did poorly in school. This supports the results showing that many students in Gumaca have poor sleep habits, mainly because they use gadgets before bedtime. The study shows that sleep problems are a real concern and that students would benefit from learning better sleep habits, like using fewer devices at night and trying relaxation methods to help them sleep better and do well in school.

Table 10. *Level of Stress of the Respondents*

Indicators	Mean	Verbal Description	Rank
1. How often do you feel unable to control the important things in your life?	2.46	Low	9
2. How often do you feel confident in your ability to handle personal problems?	2.45	Low	10
3. How often do you feel stressed about deadlines and workload?	2.98	High	3
4. How often do you feel that you do not have enough time to complete tasks?	3.01	High	2
5. How often do you feel exhausted due to academic or work-related stress?	2.70	High	5
6. How often do you feel sad or down due to stress?	2.91	High	4
7. How often do you feel irritated or annoyed by small things?	2.66	High	6
8. How often do you experience headaches or migraines due to stress?	2.51	High	8
9. How often do you have trouble sleeping due to stress?	2.26	Low	13
10. How often do you engage in physical activity to relieve stress?	2.25	Low	14
11. How often do you seek social support when feeling stressed?	2.28	Low	12
12. How often do you engage in unhealthy habits (e.g., smoking, excessive eating, alcohol use) to manage stress?	1.50	Very Low	15
13. How often do you feel that your stress level is negatively affecting your well-being?	2.38	Low	11
14. How often do you feel mentally drained at the end of the day?	2.56	High	7
15. How often do you wish you could reduce stress in your daily life?	3.14	High	1
Average Mean	2.54	High	

Legend: Very High (3.25-4.00), High (2.50-3.24), Low (1.75-2.49), Very Low (1.00-1.74).



Table 10 exhibits stress levels of learners in a public secondary school in Gumaca. The average mean is 2.54, which is verbally interpreted as “high”. As shown in the table, the indicator “How often do you wish you could reduce stress in your daily life” recorded the highest weighted mean of 3.14, which is interpreted as high. Moreover, it was followed by the indicators “How often do you feel that you do not have enough time to complete tasks” and “How often do you feel stressed about deadlines and workload,” with a weighted mean of 3.01 and 2.98, respectively, and interpreted as high. On the other hand, the indicator “How often do you engage in unhealthy habits (e.g., smoking, excessive eating, alcohol use) to manage stress” obtained the lowest weighted mean of 1.50, which is verbally interpreted as very low.

The results show that students in public secondary schools in Gumaca often feel stressed because of schoolwork, deadlines, and not having enough time to finish tasks. Many of them wish that they could reduce their stress, which means that they are looking for ways to cope. On the positive side, most students do not rely on unhealthy habits like smoking or overeating to manage their stress. These suggest that the students need time management support, workload adjustments, and stress-relief programs to manage their stress in healthier ways.

Soriano and Tuazon (2021) found that students in Quezon Province, like those in Gumaca, often feel stressed because of deadlines and family problems, which affect their school performance and attendance. This shows that academic stress is a common issue in the area. Both studies emphasize that time management, lighter workloads, and school programs are needed to help students handle stress healthily.

Table 11. *Level of Academic Performance of the Respondents*

Indicators	Mean	Verbal Description	Rank
1. What is your average academic performance (GPA or equivalent)?	2.46	Low	9
2. How often do you actively participate in class discussions?	2.45	Low	10
3. How well do you manage your time between academic and personal activities?	2.98	High	3
4. How often do you complete tasks before deadlines instead of procrastinating?	3.01	High	2
5. How confident are you in your ability to perform well in school?	2.70	High	5
6. How often do you push yourself to improve academically?	2.91	High	4
7. How often do you seek help (teachers, peers, tutors) when struggling with a subject?	2.66	High	6
8. How often do you participate in academic competitions, projects, or extracurricular activities?	2.51	High	8
9. How often do you have trouble sleeping due to stress?	2.26	Low	13
10. How often do you challenge yourself to solve complex academic problems?	2.25	Low	14
11. How satisfied are you with your current academic program?	2.28	Low	12
12. Do you believe you are reaching your full academic potential?	1.50	Very Low	15
13. How often do you challenge yourself with difficult academic tasks?	2.38	Low	11
14. How often do your friends positively influence your academic performance?	2.56	High	7
15. Do financial concerns affect your academic performance?	3.14	High	1
Average Mean	2.54	High	

Legend: Very High (3.25-4.00), High (2.50-3.24), Low (1.75-2.49), Very Low (1.00-1.74).

Table 11 reveals the academic performance of learners in a public secondary school in Gumaca. The average mean is 2.54, which is verbally interpreted as “high”. As shown in the table, the indicator “Do financial concerns affect your academic performance” recorded the highest weighted mean of 2.54, which is interpreted as high. Moreover, it was followed by the indicators “How often do you complete tasks before deadlines instead of procrastinating” and “How well do you manage your time between academic and personal activities,” with a weighted mean of 3.01 and 2.98, respectively, and interpreted as high. On the other hand, the indicator “Do you believe you are reaching your full academic potential” obtained the lowest weighted mean of 1.50, which is verbally interpreted as very low.

The results indicate that students in a public secondary school in Gumaca frequently face challenges that affect their academic performance. The average mean of 2.54 suggests that these difficulties are common. Among the factors identified, financial concerns were the most frequent, showing that economic struggles often hinder students' academic progress. Although students report efforts to manage their time and avoid procrastination, the low mean score of 1.50 regarding the belief in reaching their full academic potential points to a lack of self-confidence or academic satisfaction. These emphasize the importance of implementing academic support programs that address both external factors, such as financial stress, and internal factors, like student motivation and self-perception. Schools may benefit from offering scholarship opportunities, time management training, and counseling services to help learners improve their performance and develop a stronger sense of academic achievement.

Reyes and Aquino (2017) showed that students from low-income families often face academic difficulties due to financial problems and limited access to resources. Likewise, Bañaga and Dizon (2020) found that family responsibilities and lack of time affect students' academic success, which relates to the present findings, where students struggle with time management. The low score on students' belief in reaching their academic potential also reflects concerns about motivation and self-confidence, as discussed by Corpuz and Lucido (2019).

These show the importance of providing academic support that addresses both external challenges (like financial stress and household



duties) and internal factors (such as emotional well-being and motivation). Programs like scholarships, time management workshops, and counseling services may help students improve their academic performance and overall well-being.

Table 12. Relationship between Sleep Quality and Academic Performance of the Learners

Variables	df	Spearman's ρ value	t - value	p - value	Significant Level	Decision
Sleep Quality	78	0.380	3.627	0.001	0.05	Reject Ho

Legend: Spearman ρ correlation > 0.70 (very strong relationship), 0.40–0.69 (strong relationship), 0.30–0.39 (moderate relationship), 0.20–0.29 (weak relationship), 0.01–0.19 (no or negligible relationship); this descriptor applies to both positive and negative relationships (adapted from Dancey & Reidy, 2004).

Table 12 indicates the relationship between the sleep quality and academic performance of learners. The computed Spearman rho value is 0.380, which indicates a positive moderate relationship between sleep quality and academic performance. Using the computed t – value of 3.627, degrees of freedom of 78 in a two-tailed test, the p – value is 0.001. This relationship is found to be significant since the p-value of 0.001 is less than the 0.05 level of significance. This resulted in the rejection of the null hypothesis since there is a significant relationship between the sleep quality and academic performance of learners.

A positive moderate relationship between sleep quality and academic performance among learners implies that learners who experience quality sleep tend to have higher academic performance or higher grades. This relationship is not due to random chance since the p-value of 0.001 is less than the 0.05 level of significance. These emphasize that promoting healthy sleep habits among students is important. Interventions such as limiting the use of electronic devices before bedtime, ensuring adequate hours of sleep, and encouraging relaxation techniques can improve the academic performance of learners.

Alipio (2020) in his study found that Filipino high school students with poor sleep quality and high stress levels tend to have lower academic performance. Similarly, Lo et al. (2016) confirmed that adequate and high-quality sleep improves memory, concentration, and cognitive function, which leads to better academic outcomes. These findings emphasize the importance of promoting healthy sleep habits as a strategy to enhance students' academic performance.

Table 13. Relationship between Sleep Quality and Stress Level of the Learners

Variables	df	Spearman's ρ value	t - value	p - value	Significant Level	Decision
Sleep Quality	78	0.450	4.450	0.000	0.05	Reject Ho

Legend: Spearman ρ correlation > 0.70 (very strong relationship), 0.40–0.69 (strong relationship), 0.30–0.39 (moderate relationship), 0.20–0.29 (weak relationship), 0.01–0.19 (no or negligible relationship); this descriptor applies to both positive and negative relationships (adapted from Dancey & Reidy, 2004).

Table 13 exhibits the relationship between the sleep quality and stress level of learners. The computed Spearman rho value is 0.450, which indicates a positive, strong relationship between sleep quality and stress level. Using the computed t – value of 4.450, degrees of freedom of 78 in a two-tailed test, the p – value is 0.000. This relationship is found to be statistically significant since the p-value of 0.000 is less than 0.05 level of significance and resulted in the rejection of the null hypothesis. It indicates that there is a significant relationship between the sleep quality level and the stress level of learners.

The results indicate a strong positive relationship between students' sleep quality and their stress levels. This indicates that as the quality of sleep increases, the ability to manage stress also increases. Similarly, when learners have good sleep quality, they also have good strategies to cope with stress. Since the p-value is less than the 0.05 level of significance, it confirms that this relationship is not due to chance. This means that sleep quality has a direct impact on students' stress. Therefore, improving sleep habits can reduce the stress levels of learners.

Wheaton et al. (2016) found that high school students who do not get enough sleep often feel more stressed and anxious. Likewise, Beattie et al. (2015) revealed that poor sleep leads to more stress that affects emotional control. Moreover, Hernandez and Sarmiento (2018) also showed that students with long travel times and who have many chores experience poor sleep and have more trouble dealing with stress. These suggest that helping students improve their sleep can lower their stress. Schools can support this by teaching good sleep habits, reducing heavy schoolwork, and offering wellness programs to help students manage stress and sleep better.

Table 14. Relationship between Stress Level and Academic Performance of the Learners

Variables	df	Spearman's ρ value	t - value	p - value	Significant Level	Decision
Stress Level	78	0.515	5.305	0.000	0.05	Reject Ho

Legend: Spearman ρ correlation > 0.70 (very strong relationship), 0.40–0.69 (strong relationship), 0.30–0.39 (moderate relationship), 0.20–0.29 (weak relationship), 0.01–0.19 (no or negligible relationship); this descriptor applies to both positive and negative relationships (adapted from Dancey & Reidy, 2004).

Table 14 reveals the relationship between stress level and academic performance of learners. The computed Spearman rho value is 0.515, which indicates a positive, strong relationship between stress level and academic performance. Using the computed t – value of 5.305, degrees of freedom of 78 in a two-tailed test, the p – value is 0.000. This relationship is found to be significant since the p-value of 0.000 is less than the 0.05 level and resulted in the rejection of the null hypothesis. It indicates that there is a significant relationship between stress level and academic performance of learners.

The results indicate a strong positive relationship between students' stress levels and their academic performance. This suggests that

changes in stress levels are associated with changes in academic performance. Because the p-value is lower than the 0.05 level of significance, the null hypothesis is rejected, confirming that the observed relationship is not due to chance. This implies that stress plays an important role in students' academic outcomes. High levels of stress may negatively impact learning, while effective stress management can contribute to better academic performance. Moreover, schools are encouraged to implement stress management initiatives, such as guidance programs, counseling services, and academic support strategies, to help learners manage stress in healthy ways and improve their overall academic success.

Becker et al. (2018) observed that stressed students often get lower grades and may even feel burned out. Similarly, Alipio (2020) found that Filipino high school students who do not sleep well and feel stressed usually have poor academic performance. These confirm that although stress can sometimes motivate students, unmanaged or chronic stress hinders academic achievement. Therefore, schools should implement programs that focus on stress reduction, time management, and mental health support to help learners achieve better academic results.

Conclusions

Based on the findings, the following conclusions are derived:

Most of the student respondents are sixteen to seventeen years old. Most of the respondents are female. Most of the student respondents are in the Technical Vocational Livelihood Strand, indicating a majority population of female students over male students in the sample school. Respondents use an electronic device (e.g., phone, TV, computer) within 1 hour before bedtime. However, students need to learn how to engage themselves in relaxation techniques (e.g., deep breathing, meditation) before bed. Respondents often wish to reduce stress in their daily lives. However, they engage in unhealthy habits (e.g., smoking, excessive eating, and alcohol use) to manage stress. Respondents are concerned that their financial concerns will affect their academic performance. There is a moderate relationship between sleep quality and the academic performance of the learners. There is a strong relationship between sleep quality and stress level of the learners. There is a strong relationship between stress levels and the academic performance of the learners.

To the School Administrators, they may establish and oversee programs that encourage healthy sleep behaviors, stress management classes, and support systems for learning that are based on students' stages of development and grade levels. To the Parents, they may restrict children's use of electronic devices at night, encourage open conversation to share stress, and develop healthy habits in the home to provide better sleep and alleviate pressure on grades. To the Teachers, they may encourage school practices that minimize academic pressure, allow flexibility, and support open communication, particularly on students' welfare and study habits. To the Students, they may engage in good sleep hygiene, learn more constructive methods of coping with stress, and report academic or emotional difficulties to teachers or counselors. To future researchers, they may carry out parallel analyses for larger samples, longitudinal study designs, or implement intervention methods in an attempt to assess the effects of sleep and stress management interventions on academic performance.

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Affiliations and Corresponding Information

Charlene N. Gonzales

Eastern Quezon College Inc. – Philippines

 charlenenatalgonzales23@gmail.com

Maria Celerina D. Oreta, Ed.D.

Eastern Quezon College Inc. – Philippines

Melchor B. Espiritu, Ed.D.

Eastern Quezon College Inc. – Philippines