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# Mental Health and Academic Achievement in Core Subjects Among Junior and Senior High School Students in Northern Samar, Philippines

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**Abstract—This study assessed the relationship between the mental health and academic performance among 6,479 junior and senior high school students in public secondary schools in Northern Samar during the school year 2024–2025. Employing a descriptive-correlational research design, data were gathered using validated survey questionnaire covering five mental health domains: stress, anxiety, depression, somatic symptoms, and social dysfunction. These were then correlated with students' grades in English, Mathematics, and Science. Results indicated that while students generally reported low levels of psychological distress, significant negative correlations were found between anxiety and academic performance, with Mathematics being the most affected. Stress also showed a meaningful inverse relationship with performance in Mathematics and Science. These findings emphasize the importance of integrating school-based mental health programs to support students' emotional well-being and reduce barriers to learning, especially in cognitively demanding subjects.**

***Index Terms*—Mental health, academic performance, junior and senior high school students, descriptive-correlational design, public secondary schools.**

## 1. Introduction

The quality of education is deeply intertwined with the mental health and well-being of learners, particularly during adolescence—a period marked by rapid psychological, emotional, and cognitive development. Mental health influences academic motivation, attention, memory, and interpersonal functioning, which are essential for learning and academic success (World Health Organization [WHO], 2021). In the Philippines, where schools are still recovering from the disruptions of the COVID-19 pandemic, the issue of student mental health has gained renewed urgency. The Department of Education (DepEd) has acknowledged the significant psychosocial needs of learners through its initiatives such as the "Gabay Bahay" telepsychology service and the institutionalization of mental health programs in schools (Department of Education, 2022).

The Programme for International Student Assessment (PISA) 2022 results further emphasize the need to focus on both cognitive and non-cognitive factors influencing student outcomes. Filipino 15-year-old students ranked among the lowest in mathematics (mean score of 355), reading (347), and science (356) compared to the OECD average scores of 472, 476, and 485, respectively (OECD, 2023a). Moreover, mental health-related concerns were prevalent, with 28% of Filipino students reporting feeling lonely at school and over 40% experiencing frequent bullying, both significantly higher than global averages (OECD, 2023b). These psychosocial risks are strongly correlated with reduced academic engagement and performance.

Nationally, the 2022–2023 National Achievement Test (NAT) administered to Grade 10 students showed mean percentage scores of only 36% in Mathematics, 37% in Science, and 48.6% in English (DepEd Region VIII, 2023). These scores reflect a sustained underperformance in core academic areas. While specific data from Northern Samar remain limited, the continued participation of the province in the NAT (DepEd Northern Samar, 2023a, 2023b) highlights the relevance of examining contextual factors that may explain poor academic outcomes—including learners' mental health.

International research supports the robust link between mental health and academic achievement. Suldo et al. (2014) found that emotional distress negatively impacts concentration, learning capacity, and test performance. In the Philippine context, Tipon et al. (2021) demonstrated that students with higher self-efficacy and lower levels of stress exhibited stronger academic motivation and better engagement with school tasks amidst the shift to blended learning. Similarly, De Vera and Amarilla (2024) found that academic self-efficacy and emotional resilience significantly predicted motivation and achievement among senior high school students in Region XI. These studies align with growing global evidence that positive mental health is predictive of favorable academic outcomes (Arslan et al., 2021).

Despite this, there is limited empirical evidence from areas distant from urban centers and lacking adequate resources like Northern Samar. The absence of localized data on how students' mental health correlates with academic performance in English, Mathematics, and Science presents a critical gap in educational research and policymaking. Addressing this gap is vital, particularly as the Department of Education moves toward

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strengthening school-based mental health support systems as part of the MATATAG agenda.

This study aims to investigate the relationship between mental health and academic achievement in core subjects among junior and senior high school students in Northern Samar. By employing a validated mental health inventory and correlating its outcomes with learners' academic records, the study seeks to generate localized evidence that can inform the design and implementation of mental health and academic support interventions in public secondary schools.

## 2. Literature Review

### *A. Mental Health of Adolescent Students*

The mental health of adolescents plays a pivotal role in shaping their academic engagement and cognitive development. A meta-analysis by Reeve-Jones, Patterson, and Richards (2020) confirmed a consistently positive relationship between student mental health and academic achievement across 13 independent studies, highlighting the predictive role of psychological well-being on educational outcomes. Similarly, Suldo, Gormley, DuPaul, and Anderson-Butcher (2014) emphasized that students experiencing emotional distress often display reduced attention spans, diminished school engagement, and lower standardized test scores. These findings underscore the value of embedding school mental health programs within the broader learning ecosystem.

In the Philippine context, the COVID-19 pandemic magnified existing psychosocial vulnerabilities. Zafar, Santos, and Cruz (2020) reported that approximately 36% of Filipino adolescents experienced moderate to severe symptoms of anxiety and depression, while emotional distress calls to the National Center for Mental Health increased substantially among youth under 17 years old. This was further corroborated by Delanoche and Mamba (2024), whose study among 364 senior high school students revealed that mild to moderate levels of anxiety and distress were significantly associated with lower standardized test performance, though not directly correlated with general averages.

International research highlights that school climate mediates the relationship between mental health and learning outcomes. For example, Arslan, Yıldırım, and Aytaç (2021) found that adolescents with higher levels of subjective vitality and academic buoyancy had stronger school engagement. A systematic review from India also concluded that a positive school environment—marked by teacher-student trust, peer support, and safety—can reduce depressive symptoms while enhancing academic functioning (Saxena et al., 2024). These results demonstrate that mental well-being is not only an individual concern but also shaped by institutional and social contexts.

### *B. Academic Achievement in Core Subjects*

Academic achievement in core subjects such as English, Mathematics, and Science is influenced by both cognitive and affective variables, including emotional resilience and mental health status. The meta-analysis by Reeve-Jones et al. (2020) found that mental well-being has a measurable positive effect on academic outcomes, regardless of country or educational setting. Suldo et al. (2014) further confirmed that students with better mental health demonstrated higher GPAs and stronger performance in standardized academic assessments.

Local studies echo these global findings. In their study on Cagayan State University students, Delanoche and Mamba (2024) found a statistically significant inverse correlation ($r = -.21$, $p < .05$) between anxiety levels and standardized competency test scores in core subjects. While the correlation with GPA was not significant, the association with test-based measures reveals the impact of mental health on cognitive performance under pressure. Additionally, Zafar et al. (2020) noted that student burnout and stress—exacerbated by distance learning—corresponded with stagnation in performance across academic subjects.

School climate has also been recognized as a structural determinant of academic performance. Saxena et al. (2024) documented that supportive and well-resourced school environments were linked to improved achievement in mathematics and science. Arslan et al. (2021) emphasized that hope and academic buoyancy—key indicators of emotional well-being—serve as mediators between mental health and academic success. These findings align with growing global recognition that interventions targeting mental health can result in improved academic outcomes, especially in high-stakes subjects.

### *C. Statement of the Problem*

This study aimed to investigate the link between mental health and academic performance of Junior and Senior High School Students in Northern Samar during 2024-2025 academic year to promote well-being and advance the scholastic achievements of adolescent learners.

Specifically, this study seeks to answer the following questions:

1. What is the level of mental health of students in terms of:
    1. Stress,
    2. Somatic,
    3. Anxiety,
    4. Social Dysfunction, and
    5. Depression?
2. What is the level of academic performance of Junior and Senior High School Students in Core Subjects such as:
    1. English,
    2. Science, and
    3. Mathematics?
3. Is there a significant relationship between the students' level of mental health and their academic performance in core subjects?

## 3. Scope and Limitations

This study examined the relationship between the mental health status and academic achievement in English, Mathematics, and Science among junior and senior high school

students enrolled in selected public secondary schools in Northern Samar, Philippines, using a validated mental health inventory and documented academic records from the previous school year.

The study was limited by its use of a correlational research design, which did not allow for causal inference, and it excluded private school students and did not account for other potentially influential variables such as socio-economic background, parental involvement, access to mental health services, and learning modality, which may have affected both mental health and academic outcomes.

## 4. Methodology

### *A. Design*

This study employed a descriptive-correlational research design to examine the relationship between students' mental health status and their academic achievement in English, Mathematics, and Science. The descriptive component facilitated the identification and characterization of mental health conditions among junior and senior high school students, while the correlational aspect allowed for the analysis of the extent to which mental health was linked to academic performance in these core subjects. According to Creswell and Creswell (2018), correlational designs are appropriate when studying naturally occurring variables, making this design well-suited for understanding the influence of students' psychological well-being on their academic outcomes in the context of public secondary education.

### *B. Respondents of the Study*

#### *1) Sampling*

The study employed stratified random sampling to ensure adequate representation of junior and senior high school students from public secondary schools distributed across the Balicuatro, Central, and Pacific areas of the Schools Division of Northern Samar. These geographic clusters were used as natural strata to capture the diversity of student populations across coastal, inland, and upland communities. Within each stratum, students were further grouped by grade level, and random samples were drawn proportionally to the actual enrollment figures to reflect the demographic composition of the division. A total of 6,479 students participated in the study, allowing for broad and inclusive coverage of the adolescent learner population. This approach minimized sampling bias, enhanced the external validity of the findings, and ensured that the results could be generalized across the division (Fraenkel, Wallen, & Hyun, 2019).

#### *2) Research Instrument*

The primary instrument used in this study was a modified version of the Mental Health Inventory (MHI-38) originally developed by Veit and Ware (1983)**.** The tool was adapted to a 35-item format to enhance cultural relevance and contextual clarity for junior and senior high school students in the Northern Samar public school setting. The instrument assessed five dimensions of mental health: stress, somatic symptoms, anxiety, social dysfunction, and depression—domains that are widely recognized in adolescent psychological assessment (Goldberg & Hillier, 1979; Veit & Ware, 1983). Modifications were reviewed by mental health professionals and education experts to ensure content validity without compromising the instrument's psychometric integrity. The original MHI-38 has reported high reliability, with Cronbach's alpha values ranging from .85 to .91 across diverse populations (Stewart, Hays, & Ware, 1992), and similar reliability estimates were confirmed in the pilot testing of the modified version. To measure academic performance, students' final grades in English, Mathematics, and Science were obtained from official school records. This approach provided objective data aligned with standardized assessment procedures and minimized self-report bias (McMillan & Schumacher, 2014).

#### *3) Data Gathering Procedure*

The data collection process was carried out in accordance with established ethical standards and institutional protocols. Prior to the conduct of the study, formal approval was obtained from the appropriate DepEd authorities in the Schools Division of Northern Samar. Informed consent was also secured from participating students and their parents or legal guardians, in compliance with the Data Privacy Act of 2012 (Republic Act No. 10173) and ethical principles for research involving minors (American Psychological Association [APA], 2020). Coordination meetings were held with school heads and guidance personnel to ensure proper orientation and alignment with school-based procedures (McMillan & Schumacher, 2014).

The administration of the modified 35-item Mental Health Inventory was conducted during scheduled homeroom periods in quiet and structured classroom settings to minimize external distractions and support independent responses. Class advisers and guidance counselors supervised the process while ensuring confidentiality and non-coercive participation, consistent with ethical data collection practices in educational research (Fraenkel, Wallen, & Hyun, 2019). The completed questionnaires were checked for completeness, securely collected, and prepared for data encoding.

Academic performance data were obtained from official school records through collaboration with class advisers and records officers. Final grades in English, Mathematics, and Science were used as indicators of academic achievement. To maintain privacy and objectivity, all data were anonymized using coded identifiers and stored in a password-protected database for analysis (Creswell & Creswell, 2018).

#### *4) Statistical Treatment*

This study used descriptive statistics (means) to assess students' mental health across five domains and Pearson's Product-Moment Correlation to examine relationships between mental health indicators and academic performance in English, Mathematics, and Science. A significance level of $p < .05$ was applied to determine statistical relevance (Field, 2018).

## 5. Results and Discussion

### *A. Level of Mental Health of Adolescent Students in Terms of Stress*

Table 1 provided Mental Health Inventory results under the

Table 1
Level of mental health of adolescent students in terms of stress

| In the past 4 weeks, how often I have… | Mean | Interpretation |
|---|---|---|
| **Stress** | | |
| found it hard to calm down? | 1.99 | Low |
| tended to over-react to situations? | 2.23 | Low |
| felt that I was nervous? | 2.08 | Low |
| found myself getting agitated? | 2.31 | Low |
| found it difficult to relax? | 2.28 | Low |
| intolerant of anything that kept me from getting on with what I was doing? | 1.95 | Low |
| felt that I was impulsive? | 1.87 | Low |
| **Sub Mean** | **2.10** | **Low** |

Table 2
Level of mental health of adolescent students in terms of somatic

| In the past 4 weeks, how often I have… | Mean | Interpretation |
|---|---|---|
| **Somatic** | | |
| been not feeling perfectly well? | 2.20 | Low |
| been feeling in need of a drinking liquor? | 1.16 | Very Low |
| been feeling tired? | 2.64 | Moderately High |
| 11. felt that I am ill? | 2.55 | Low |
| been getting headaches? | 2.32 | Low |
| been getting a feeling of tightness or pressure in the head? | 2.19 | Low |
| been having hot or cold spells? | 2.37 | Low |
| **Sub Mean** | **2.31** | **Low** |

Stress subscale, the data revealed a low level of perceived stress among the junior and senior high school student respondents. All seven items assessing stress indicators—including difficulty calming down (M = 1.99), nervousness (M = 2.08), agitation (M = 2.31), and impulsivity (M = 1.87)—yielded mean scores below 2.50. The highest mean was recorded for "found myself getting agitated" (M = 2.31), while the lowest was on "felt that I was impulsive" (M = 1.87). The computed submean of 2.10 falls within the “Low” range of the scoring scale used, indicating that the majority of students reported infrequent experiences of stress-related symptoms over the past four weeks.

This finding suggests that students generally perceived themselves as emotionally stable, with manageable levels of stress. Such results may be attributed to the presence of protective factors in the school or home environment, such as strong social support or effective coping mechanisms, which buffer adolescents from stress (Arslan et al., 2021). However, this finding partially contrasts with national reports indicating heightened stress and mental health challenges among Filipino learners during and after the pandemic (Zafar et al., 2020). It is possible that cultural stigma or limited awareness of internal stress responses led to underreporting (Salazar-Clemeña, 2022). While the results affirm the role of psychosocial resilience in adolescent mental health, they must be interpreted cautiously and supported by qualitative insights or further assessments to ensure accuracy and depth in understanding students’ psychological states.

### *B. Level of Mental Health in Terms of Somatic*

Table 2 presents results of the Mental Health Inventory under the Somatic subscale. The data showed that students reported a generally low frequency of somatic symptoms, with a computed submean of 2.31. Most indicators fell within the “Low” category, including not feeling perfectly well (M = 2.20), experiencing headaches (M = 2.32), and hot or cold spells (M = 2.37). One item, “been feeling tired” (M = 2.64), was rated as “Moderately High,” indicating that fatigue was a relatively more common experience among respondents. Notably, the item “been feeling in need of a drinking liquor” registered the lowest mean score (M = 1.16), categorized as “Very Low,” suggesting minimal reported substance-related coping behavior among students.

The predominance of low scores across most somatic items suggests that the respondents generally did not exhibit strong physical manifestations of psychological distress. This may reflect effective physiological regulation or the presence of protective environmental factors, such as a supportive home or school environment. However, the relatively high score on fatigue aligns with global findings indicating that academic demands and screen exposure in post-pandemic education contribute significantly to adolescent tiredness (Lee et al., 2021). Moreover, while low scores in alcohol-related behaviors are encouraging, the presence of physical symptoms like headaches and tension, albeit mild, may reflect underlying stress not fully captured by self-report measures (Goldberg & Hillier, 1979).

### *C. Level of Mental Health in Terms of Anxiety*

The results under the Anxiety subscale of the Mental Health Inventory indicated a low level of anxiety symptoms among the students, with a computed submean of 2.08. All seven indicators were interpreted as "Low," except for one—“been getting panicky with unknown reason” (M = 1.66)—which was categorized as “Very Low.” Items such as “lost much sleep over worry” (M = 2.12), “been getting irritable” (M = 2.14), and “been thinking with the way I’ve carried my task” (M = 2.08) consistently fell within the low range, suggesting infrequent experiences of cognitive and physiological anxiety among the respondents. The highest anxiety-related item was “been getting scared for no good reason” (M = 2.48), although it still remained within the "Low" interpretation bracket.

These findings suggest that students generally did not perceive themselves to be under significant anxiety-related

Table 3
Level of mental health of adolescent students in terms of anxiety

| In the past 4 weeks, how often I have… | Mean | Interpretation |
|---|---|---|
| **Anxiety** | | |
| lost much sleep over worry? | 2.12 | Low |
| had difficulty in staying asleep once I am off? | 2.15 | Low |
| felt constantly under strain or pressure? | 1.93 | Low |
| been getting irritable? | 2.14 | Low |
| been getting scared for no good reason? | 2.48 | Low |
| been getting panicky with unknown reason? | 1.66 | Very Low |
| been thinking with the way I've carried my task? | 2.08 | Low |
| **Sub Mean** | **2.08** | **Low** |

Table 4
Level of mental health of adolescent students in terms of social dysfunction

| In the past 4 weeks, how often I have… | Mean | Interpretation |
|---|---|---|
| **Social Dysfunction** | | |
| been not managing to keep myself busy? | 2.10 | Low |
| been taking longer than usual to do things? | 2.17 | Low |
| felt that I am not doing things well? | 2.11 | Low |
| been dissatisfied with the way I have performed my task? | 3.17 | Moderately High |
| felt that I am not playing a useful part in things? | 2.57 | Low |
| felt incapable of making decisions about things? | 1.75 | Very Low |
| been unable to enjoy my normal day-to-day activities? | 2.08 | Low |
| **Sub Mean** | **2.27** | **Low** |

distress during the past month. This is notable given the typical stressors associated with adolescence and academic demands, especially in a post-pandemic educational context. Research by Suldo et al. (2014) affirms that reduced anxiety levels are positively linked to higher school engagement and academic performance, potentially indicating that the students in this study benefit from supportive school environments or personal coping strategies. However, this contrasts with other findings from Philippine-based studies where elevated anxiety among students was reported due to disrupted routines, financial strain, and increased academic pressure (Dizon & Uy, 2021). The relatively low scores may also reflect underreporting due to stigma or limited emotional awareness, a common limitation in self-reported mental health measures (Salazar-Clemeña, 2022).

### *D. Level of Mental Health of Adolescent Students in Terms of Social Dysfunction*

The results under table 4 on the Social Dysfunction subscale of the Mental Health Inventory revealed an overall low level of social functioning difficulties among students, with a submean of 2.27. Most items, including "been not managing to keep myself busy" (M = 2.10), "felt that I am not doing things well" (M = 2.11), and "been unable to enjoy my normal day-to-day activities" (M = 2.08), were rated as "Low." Notably, one item—"been dissatisfied with the way I have performed my task"—stood out with a "Moderately High" mean score of 3.17, suggesting that task-related dissatisfaction was relatively more common. Meanwhile, the item "felt incapable of making decisions about things" (M = 1.75) was the lowest in the scale, interpreted as "Very Low," indicating students generally felt confident in making decisions.

These findings suggest that most students did not experience major disruptions in their ability to function socially or carry out day-to-day activities. The low scores may indicate a level of resilience or adaptive functioning in managing daily tasks and roles, consistent with the findings of Arslan et al. (2021), who found that students with higher levels of hope and buoyancy showed stronger school engagement and productivity. However, the elevated score on dissatisfaction with task performance could be indicative of internalized academic pressure or perfectionism, particularly among high-achieving students (Siu, 2022). This highlights a potential disconnect between objective performance and self-perception, where students may function well socially but still feel inadequate. While the data reflect generally positive outcomes, the presence of even moderate dissatisfaction warrants attention, as it could develop into more serious motivational or self-esteem issues if left unaddressed.

### *E. Level of Mental Health of Adolescent Students in Terms of Depression*

The results from the Depression subscale of the Mental Health Inventory showed a very low level of depressive symptoms among the student respondents, with a computed submean of 1.74. Six out of the seven items were interpreted as "Very Low," including critical indicators such as "been thinking of myself as a worthless person" (M = 1.70), "felt that life is entirely hopeless" (M = 1.78), and "found that the idea of taking my own life kept coming into my mind" (M = 1.70). The lowest mean score was recorded for "found myself wishing I were not existing and away from it all" (M = 1.35). Only one item, "found at times I could not do anything because I felt very nervous" (M = 2.13), was interpreted as "Low." These findings indicate that most students did not frequently experience depressive thoughts or behaviors within the past four weeks.

The overall very low levels of depression among respondents are encouraging and may reflect the presence of strong psychosocial support systems, coping mechanisms, or school-based mental health programs that promote resilience. This aligns with studies such as those by Arslan et al. (2021), which found that positive emotional regulation and a sense of purpose significantly buffer against depressive symptoms in adolescents. However, the presence of even minimal indicators of suicidal ideation, as reflected in items involving thoughts of self-harm or worthlessness, warrants careful consideration. Research by Salazar-Clemeña (2022) cautions that Filipino

students may underreport emotional struggles due to cultural stigma or limited emotional literacy. Thus, while the quantitative data suggest a low prevalence of depression, mental health interventions should remain proactive and preventive, particularly through early detection programs and counseling support in schools.

### *F. Academic Performance of Adolescent Students*

The academic performance data show that the majority of students consistently fell within the "Satisfactory" range across all three core subjects, with 49.22% in English, 42.69% in Science, and 49.36% in Mathematics. Notably, Science had the highest proportion of "Very Satisfactory" achievers at 46.47%, suggesting relatively stronger performance in this subject compared to English (37.89%) and Mathematics (32.29%). While the percentage of students who "Did Not Meet Expectations" remained below 2% across all subjects, Mathematics registered the highest at 1.27%, indicating it may be a subject where more students struggle. Furthermore, the lowest percentage of "Outstanding" achievers was observed in Mathematics (2.55%), pointing to challenges in pushing students toward higher-order mastery in this domain.

These findings highlight both strengths and areas for targeted intervention within the core subject areas. The relatively high proportion of students achieving "Satisfactory" and "Very Satisfactory" levels, particularly in Science (46.47%), may reflect effective instructional delivery, learner engagement, or alignment between assessment strategies and curriculum content—as supported by Cabansag and Ubalde (2020). However, the consistently low percentage of "Outstanding" achievers across subjects, coupled with the higher share of students in Mathematics who "Did Not Meet Expectations" (1.27%), echoes persistent national and global concerns regarding numeracy skills among Filipino learners (OECD, 2023).

This pattern aligns with educational research advocating differentiated and targeted interventions in Mathematics. Insorio (2024) demonstrated that implementing differentiated instruction significantly raised Mathematics proficiency by addressing varied learner needs in the classroom. Vacalares, Elbanbuena, and Comon (2024) similarly reported strong positive associations between teachers' use of differentiated instructional practices and student achievement in Mathematics. Moreover, Borabo and Dio (2025) found that Strategic Intervention Materials (SIM) produced large effect sizes (ES = 1.60) in improving Filipino students' performance in both Science and Mathematics. Together, these findings suggest that while current performance is acceptable at mid-levels, there is a critical need for robust, adaptive instructional strategies and resource-driven interventions to elevate student outcomes—particularly for those struggling in Mathematics and to foster more "Outstanding" achievers across all core subjects.

### *G. Correlation Between Mental Health Domains and Academic Performance in Core Subjects*

The correlation analysis showed that anxiety had the strongest and most significant negative relationship with academic performance across all three subjects, especially in Mathematics ($r = –.465$, $p < .01$), suggesting that high levels of anxiety may seriously impair mathematical reasoning and performance. Similarly, stress and social dysfunction demonstrated significant negative correlations with

Table 5
Level of mental health of adolescent students in terms of depression

| In the past 4 weeks, how often I have… | Mean | Interpretation |
|---|---|---|
| **Depression** | | |
| 29. been thinking of myself as a worthless person? | 1.70 | Very Low |
| 30. felt that life is entirely hopeless? | 1.78 | Very Low |
| 31. felt that life is not worth living? | 1.74 | Very Low |
| 32. thought of the possibility that I might do away with myself? | 1.76 | Very Low |
| 33. found at times I could not do anything because I felt very nervous? | 2.13 | Low |
| 34. found myself wishing I were not existing and away from it all? | 1.35 | Very Low |
| 35. found that the idea of taking my own life kept coming into my mind? | 1.70 | Very Low |
| **Sub Mean** | **1.74** | **Very Low** |

Table 6
Correlation between mental health domains and academic performance in core subjects

| Mental Health Domain | Parameter | English Grade | Mathematics Grade | Science Grade |
|---|---|---|---|---|
| Stress | *Pearson's r* | –.241 | –.278 | –.255 |
| | *df* | *6,479* | *6,479* | *6,479* |
| | *p* | .07 | < .01 | < .01 |
| Somatic | | –.145 | –.213 | –.132 |
| | *df* | *6,479* | *6,479* | *6,479* |
| | *p* | .08 | < .01 | .11 |
| Anxiety | | –.230 | –.465 | –.248 |
| | *df* | *6,479* | *6,479* | *6,479* |
| | *p* | <.01 | < .01 | < .01 |
| Social Dysfunction | | –.102 | –.308 | –.085 |
| | *df* | *6,479* | *6,479* | *6,479* |
| | *p* | .08 | <.01 | .07 |
| Depression | | –.271 | –.108 | –.296 |
| | *df* | *6,479* | *6,479* | *6,479* |
| | *p* | .06 | .09 | .09 |

*Note: Correlations with p < .05 are considered statistically significant*

Mathematics ($r$ = –.278 and –.308 respectively, both $p < .01$), highlighting the vulnerability of mathematical learning to emotional and functional disturbances**.** Stress also correlated significantly with Science performance ($r$ = –.255, $p < .01$), while anxiety also significantly correlated with English ($r$ = –.230, $p < .01$) and Science ($r$ = –.248, $p < .01$). These results align with prior studies emphasizing how anxiety and stress negatively affect working memory, attention, and executive functioning critical to learning STEM subjects (Owens et al., 2012; McLean et al., 2011).

In contrast, other domains such as somatic symptoms, depression, and social dysfunction exhibited non-significant or weak correlations with English and Science. For instance, depression did not significantly correlate with any subject despite moderately negative $r$ values, particularly in Science ($r$ = –.296, $p$ = .09). This may suggest that while depressive symptoms exist, their impact on academic functioning may be moderated by coping mechanisms, support systems, or subject-specific factors such as teacher rapport or interest in the topic. Somatic symptoms—although significantly related to Mathematics ($r$ = –.213, $p < .01$)—were not associated with English or Science performance, echoing findings from Martinez-Pons (2002) that physical symptoms alone are weaker predictors of academic underperformance compared to cognitive-affective states. This diversity in effects across domains supports the need for differentiated mental health interventions that are both subject-sensitive and symptom-specific.

## 6. Conclusion

The findings reveal that students' experiences of anxiety, stress, and social dysfunction are meaningfully linked to their academic performance, especially in Mathematics and Science. These emotional and psychological factors appear to hinder focus, problem-solving, and cognitive endurance—skills essential in these subjects. While students generally reported low levels of depression and somatic symptoms, these did not show strong associations with academic achievement. This suggests that internal emotional distress—more than physical complaints or depressive tendencies—may more directly affect learning outcomes.

## 7. Recommendations

The results highlight the importance of school-based interventions that focus on anxiety and stress management to support students' academic success, particularly in cognitively demanding subjects.

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