

AN ANALYSIS OF STRESS AMONG THAI HIGH SCHOOL STUDENTS: THE INFLUENCE OF GRADE LEVEL, GENDER, AND FAMILY STATUS

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ABSTRACT

This study investigated factors influencing stress among Thai high school students, with particular attention to grade level, gender, and family status. It assessed academic-related, personal/emotional, and social/environmental stress, and examined differences in stress levels across demographic groups. The research employed a quantitative–descriptive–comparative design. The 71 students from Grades 7 to 9 at Don Mueang Taharnargbumrung School were selected through stratified random sampling. Data collection involved a researcher-developed, adapted questionnaire based on established, widely used stress measurement scales, including the Perceived Stress Scale and the Student Stress Inventory. Statistical analyses, including frequencies, percentages, weighted means, t-tests, ANOVAs, and Pearson correlations, were conducted by a statistician. The results indicated that students experienced a moderate overall level of stress, with academic-related stress emerging as the most significant stressor. Personal/emotional stress was rated as neutral, while social/environmental stress was rated as moderate. No significant differences in academic, personal, or social stress were found across grade level, gender, or family status, indicating that stress is prevalent among students regardless of demographic characteristics. In response, the study proposed the CALM Minds Program (Coping, Academic Balance, Life Skills, and Mindfulness) to reduce student stress and promote well-being. These findings underscore the importance of school-based and family-supported interventions to address student stress and improve mental health among Thai adolescents.

Keywords: *Student stress, Academic stress, Thai high school students, Gender differences, Family status, Stress management, CALM Minds Program, Educational psychology.*

INTRODUCTION

Stress has become increasingly common among students worldwide, affecting their emotional well-being, academic achievement, and life satisfaction. In Thailand, pressures from academics, family expectations, and changes in social life significantly increase students' stress levels (Thanachoksawang et al., 2024). Student stress can be expressed emotionally, behaviorally, or physically and may manifest in ways that inhibit peak performance (Jetiyanuwat et al., 2024). Understanding the causes of student stress in Thailand may help to develop targeted interventions designed to promote mental health and resilience.

To make targeted interventions that promote both mental health and resilience among Thai students, a deep understanding of the factors contributing to student stress is essential. Various demographic characteristics are crucial in determining the level of stress students experience, including academic grades, gender, and family status. According to some studies, older students often experience stress from academic pressures when transferring to a higher institution (Sunthi et al., 2023). In addition, female students generally report higher levels of stress than males because of emotionally and socially filled expectations towards women rooted in different historical periods than are today reflected in Thai society (Thanachoksawang et al., 2024).

The family environment not only shapes students' inner world but also plays a vital role in influencing their emotional well-being. Disparities like parental marital status, the (strikingly bald) disparity between rich and low-income families, and parental involvement have all been shown to affect the amount of stress students put up with. Luvira et al. (2023) found that people from families characterized by poor communication or domestic strife are more likely to experience significant mental health challenges. Similarly, Jetiyanuwat et al (2024) also find that low-income family functioning and lack of emotional support from their family are likely to be associated with youngsters' increased emotional and behavioral problems.

Students from harmonious and open families demonstrate lower stress levels and greater resilience. These results highlight the dual role of families as both protective factors against stress and potential sources of vulnerability. This interpretation aligns with both international and local research that emphasizes the impact of educational level, gender, and family dynamics on students' experiences of stress.

In Thailand, these psychosocial factors are further supported by robust legal frameworks that guarantee students' rights to quality education. The Constitution of the Kingdom of Thailand (2017), Section 54, guarantees every individual the right to receive free and quality education for at least 12 years, emphasizing accessibility and equity in educational provision.

Additionally, the National Education Act B.E. 2542 (1999) affirms that all individuals have equal rights and opportunities to receive basic education provided by the state, which must be both free and of quality. These legal provisions underscore the state's responsibility to provide not only access to education but also a nurturing and inclusive learning environment that promotes students' overall well-being.

Furthermore, Thailand's commitment to international frameworks, such as the Convention on the Rights of the Child (CRC), reinforces the obligation to address students' psychosocial needs within educational settings.

This study examined the impact of grade level, gender, and family status on stress among Thai learners, providing comprehensive evidence for teachers, advisers, and policymakers. By integrating empirical research with legal mandates, the study aims to inform the development of effective school-based mental health strategies and family-inclusive interventions that uphold students' rights to quality education and holistic development.

Theoretical Framework

This theory was supported by the factors influencing stress among Thai students in Don Mueang Taharnargbumrung School.

1. Lazarus and Folkman's Transactional Model of Stress and Coping (1984)

Lazarus and Folkman's (1984) Transactional Model of Stress and Coping remain a prominent framework for understanding how individuals perceive and respond to stress. This model posits that stress is not merely a stimulus or a response; rather, it is an interaction between the person and their environment. Stress manifests when individuals believe that the challenges presented by a situation surpass their available coping resources.

In terms of Thai students, this model suggests that several variables—such as grade (older age may be exposed to greater academic demands), gender (boys and girls have different emotional regulations), and family status (single-parent families or low-income households) —are crucial to how students evaluate their stressful situations and choose coping strategies. Ambitions, perfectionism derived from or imposed by parents/friends, or a strong sense of duty to family/education, for example, can increase students' susceptibility to stress, especially when necessary, coping mechanisms/support are lacking.

2. Bronfenbrenner's Ecological Systems Theory (1979)

According to Bronfenbrenner's Ecosystems Perspective, an individual is influenced by 5 interconnected social systems that together shape development. These levels are the microsystem (including family, school, and peer influence), mesosystem (interactions between parents and the educational environment), exosystem (involving parents' workplaces or social networks), and macrosystem (establishing broader cultural context and societal values).

This investigation describes how family conditions (supportive and disordered) and the school environment strongly influence stress perception. The macrosystem also reflects Thai cultural values of respect for authority and the emphasis on academic achievement, which are known determinants of how students appraise and cope with stress. As such, grade level and sex intersect these systems, with each student's experience of stress uniquely shaped.

Interconnection of the Two Frameworks

Psychological and developmental perspectives on stress among Thai students are clarified by integrating Stress and Coping Theory with Ecological Systems Theory. Stress and Coping Theory posits that stress occurs when individuals perceive their resources as

insufficient to meet environmental demands. This framework emphasizes that students' stress responses are shaped by cognitive appraisals and coping strategies. For instance, older students may experience increased academic stress due to greater workload and expectations, while gender differences can influence coping styles. Research suggests that female students often exhibit higher emotional reactivity than male students. Additionally, individual factors, such as access to emotional and financial support, play a crucial role in determining the effectiveness of students' stress management.

Ecological Systems Theory complements this perspective by placing students' stress within a broader social and environmental context. The theory asserts that stress is shaped by multiple interacting systems, with particular emphasis on the microsystem, which includes family, peers, and school environments. These immediate contexts affect students' stress levels through academic demands, interpersonal differences, and social expectations. Moreover, Thailand's broader cultural context, including societal expectations for academic achievement, further shapes how stress is experienced and managed.

Integrating these two frameworks provides a comprehensive understanding of student stress. Stress and Coping Theory addresses internal processes, such as students' perceptions and responses to stress, while Ecological Systems Theory examines external influences, including family, school, and societal environments. Collectively, these frameworks demonstrate that stress among Thai students arises from the interaction between personal appraisals and environmental conditions. Differences in stress by grade level, gender, and family status can therefore be understood as outcomes of both individual coping mechanisms and the broader social context. This integrated perspective offers a holistic foundation for analyzing student stress and for developing interventions that address both personal and environmental factors.

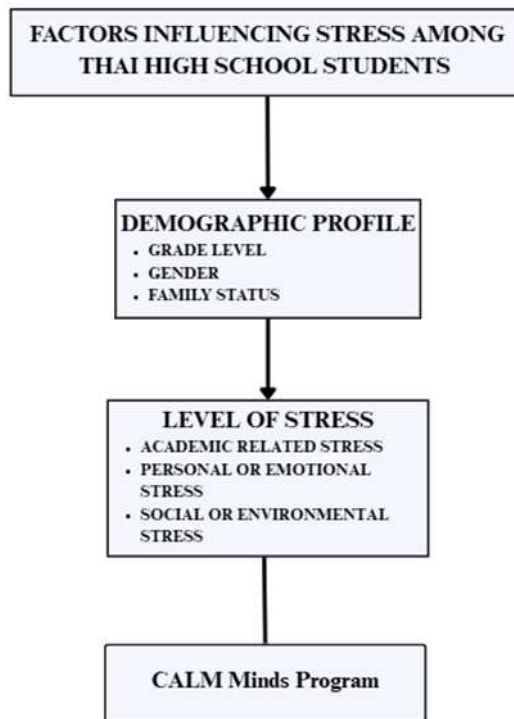
Conceptual Framework

This study presents a conceptual framework illustrating the differences among demographic factors—grade level, gender, and family status and the level of stress experienced by Thai high school students. The framework serves as a guide for data collection, analysis, and interpretation, ensuring alignment with the research objectives.

At the top of the diagram is the focus of the study: Factors Influencing Stress Among Thai High School Students. These factors are categorized under the demographic profile, which includes grade level, gender, and family status as independent variables.

The level of stress is the dependent variable and is divided into three dimensions: academic, personal or emotional, and social or environmental. The arrows in the framework indicate a unidirectional difference in which demographic factors influence students' stress levels.

Based on the findings of the study, the CALM Minds Program is proposed as an intervention. This program is developed in response to the identified stress levels and their associated demographic factors, aiming to provide practical stress management strategies. It focuses on helping students cope effectively with academic, emotional, and social challenges, thereby promoting their overall well-being.



Conceptual Model Showing the Factors Influencing Stress Among Thai High School Students: Grade Level, Gender, and Family Status

Research Questions

The purpose of this study was to determine the factors influencing stress of Thai high school students in terms of grade level, gender, and family status.

Specifically, this study seeks to answer the following questions:

1. What is the demographic profiles of the respondents in terms of:
 - 1.1 grade level;
 - 1.2 gender; and
 - 1.3 family status?
2. What is the overall level of stress experienced by Thai high school students in terms of:
 - 2.1 academic-related stress;
 - 2.2 personal or emotional stress; and
 - 2.3 social or environmental stress?
3. Is there a significant difference in the level of stress experienced by Thai high school students and the demographic profile of the respondents?
4. What program or intervention can be proposed to help reduce stress among Thai high School students?

METHODOLOGY

The study used a quantitative–descriptive–comparative research design to examine differences in stress levels among students based on grade level, gender, and family status. It was conducted at Don Mueang Taharnargbumrung School with 71 students (Grades 7–9) selected through stratified random sampling to ensure representation across demographic groups. Data were gathered using a researcher-adapted questionnaire based on established stress scales (Perceived Stress Scale and Student Stress Inventory), validated by experts and measured using a Likert scale. The researcher followed a formal data collection procedure (permission, consent, distribution, retrieval, and coding of questionnaires), ensuring confidentiality and voluntary participation. Data were analyzed using descriptive and inferential statistics, including frequency, percentage, weighted mean, standard deviation, t-test, ANOVA, and Pearson correlation to determine stress levels and differences among variables.

Scope and Delimitations of the Study

This study examined the differences among grade level, gender, family status, and stress levels among Thai high school students in Grades 7, 8, and 9 at Don Mueang Taharnargbumrung School during the 2024–2025 academic year.

The primary objective was to determine whether and how these factors are associated with variations in students' stress levels, rather than to manipulate variables. Identifying these differences enables the recognition of patterns and differences in stress experiences across groups, which may inform targeted interventions. Stress was assessed across three dimensions: academic-related, personal or emotional, and social or environmental.

The study is limited to self-reported data collected through questionnaires and does not account for additional factors that may influence stress, such as socioeconomic status or extracurricular involvement. The findings are specific to students at this school and may not be generalizable to other schools or regions.

Definition of Terms

To truly understand the research, the following terms were defined operationally, **Academic Stress.** Refers to the stress experienced by students due to academic demands such as homework, examinations, performance expectations, and difficulty understanding lessons.

CALM Minds Program. Refers to the proposed stress reduction program developed in this study, which focuses on Coping, Academic Balance, Life Skills, and Mindfulness to improve students' well-being.

Emotional Stress. Refers to feelings of anxiety, worry, tension, or sadness experienced by students due to personal, academic, or social pressures.

Family Status. Refers to the family structure of the respondent, categorized as living with married parents, single-parent, or other family arrangements, as reported in the demographic profile.

Gender. Refers to the biological sex of the respondents, categorized as male or female, as indicated in the survey.

Grade Level. Refers to the student's current level in secondary education, specifically Grade 7, Grade 8, or Grade 9.

Mindfulness. Refers to the practice of being aware and present in the moment through techniques such as breathing exercises and meditation to reduce stress.

Personal Stress. Refers to stress arising from individual concerns such as self-esteem, personal expectations, and life challenges experienced by students.

Social Stress. Refers to stress experienced by students in relation to peer interactions, social acceptance, and environmental factors within the school or community.

Stress. Refers to the physical and psychological response of students to demands or pressures perceived as challenging or overwhelming.

Stress Management. Refers to strategies and techniques used by students to cope with and reduce stress, including relaxation, time management, and seeking social support.

Student Well-being. Refers to the overall mental, emotional, and psychological health of students, including their ability to cope with stress and function effectively in school.

Data Gathering Procedure and Data Analysis

The data collection followed a systematic process beginning with securing permission from school authorities and informing respondents about the study's purpose, voluntary participation, and confidentiality. A validated questionnaire, adapted from established stress scales, was distributed using stratified random sampling. The researcher supervised the administration, ensured proper completion, and collected and coded the responses for analysis.

For data analysis, both descriptive and inferential statistics were used. Frequencies and percentages described respondents' profiles, while weighted mean and standard deviation measured stress levels. Differences among variables were analyzed using t-test, ANOVA, post hoc analysis, and Pearson correlation, with results interpreted at a 0.05 significance level.

RESULTS AND DISCUSSION

Research Question 1. Demographic profiles of the respondents in terms of:

1.1 grade level

1.2 gender

1.3 family status

Table 1.1: Demographic Profile of the Respondents in Terms of Grade Level

Grade Level	Frequency	Percentage
Grade 7	28	39.4
Grade 8	18	25.4
Grade 9	25	35.2
Total	71	100.0

Table 1.1 shows the distribution of respondents by grade level. Of the 71 respondents, 28 students (39.4%) were in Grade 7, the largest group in the study. This was followed by Grade 9, with 25 respondents (35.2%). Meanwhile, Grade 8 had 18 respondents, representing 25.4% of the total sample.

The results indicate that students from all junior high school grade levels were represented in the study. The relatively higher number of respondents from Grades 7 and 9 suggests broader participation from students at both the early and later stages of junior high school, enabling a more comprehensive assessment of stress levels across grade levels.

Table 1.2: Demographic Profile of the Respondents in Terms of Gender

Gender	Frequency	Percentage
Male	38	53.5
Female	33	46.5
Total	71	100.0

Table 1.2 presents the demographic profile of respondents by gender. The data show that 38 respondents (53.5%) were male and 33 respondents (46.5%) were female. This reflects a relatively balanced gender distribution, with a marginally higher proportion of male students.

The near-equal representation of male and female respondents enhances the reliability of the findings by enabling meaningful comparisons of stress levels across gender groups and reducing potential gender bias in the analysis.

Table 1.3: Demographic Profile of the Respondents in Terms of Family Status

Family Status	Frequency	Percentage
Married parents (Living together)	21	29.6
Divorced/separated parents	50	70.4
Total	71	100.0

Table 1.3 shows the demographic profile of respondents by family status. Of the 71 respondents, 50 students (70.4%) said their parents were divorced or separated. The remaining 21 students (29.6%) indicated their parents were married and living together. These findings show that most respondents came from non-intact family structures.

This result is significant because recent empirical studies consistently demonstrate that adolescents from divorced or separated families are more likely to experience elevated levels of stress, emotional instability, and psychological distress compared to those from intact families. A recent large-scale study on adolescent mental health identified parental separation as a strong predictor of stress, anxiety, and emotional difficulties among secondary school students (Tran, 2023). Similarly, national research in Thailand found that family-related factors, including parental marital status, are significantly associated with students' psychological distress and overall mental well-being (Thanachoksawang, 2024).

Furthermore, recent systematic reviews emphasize that students from disrupted family environments often require additional emotional and psychosocial support, particularly within school settings, to mitigate stress and promote resilience (Phan et al., 2022). The corroborating evidence in the present study underscores the importance of considering family status when interpreting stress levels among Thai high school students. The high proportion of respondents from divorced or separated families highlights the necessity for school-based counseling services and stress-reduction programs tailored to students' family status.

Research Question 2. The overall level of stress experienced by Thai high school students in terms of:

- 2.1 academic-related stress
- 2.2 personal or emotional stress
- 2.3 social or environmental stress

Table 2.1: Overall Level of Stress Experienced by Thai High School Students in Terms of Academic-Related Stress

Academic-Related Stress	WM	VI
1. I get stressed when doing lots of homework or work.	3.83	A
2. I become restless when studying for my tests.	3.18	N
3. I feel that I only want to keep my grades up.	3.99	A
4. I'm stressed out about how much in this study package I must memorize.	3.75	A
5. I have anxiety about living up to my teachers' expectations.	3.65	A
6. I am stressed because I do not get to understand the hard topics.	3.85	A
7. I am comparing myself with my friends about my studies.	2.90	N
8. I get nervous when I have too many deadlines to meet all at once.	3.69	A
9. I feel the pressure to join academic contests or programs.	3.10	N
10. I stress out when I have to juggle schoolwork and after-school activities.	3.30	N
Composite Mean	3.52	A

Table 2.1 presents the overall level of academic-related stress among Thai high school students. Among the ten indicators, several items received weighted means interpreted as Agree, indicating that respondents perceived academic demands as significant sources of stress. Specifically, students reported stress related to maintaining good grades (WM = 3.99, Agree), managing a large amount of homework or schoolwork

(WM = 3.83, Agree), and difficulty understanding challenging topics (WM = 3.85, Agree). These findings suggest that expectations regarding academic performance and workload are a prominent source of stress for respondents.

In contrast, other academic-related stressors, such as restlessness when studying for tests (WM = 3.18, Neutral) and perceived pressure to participate in academic contests or programs (WM = 3.10, Neutral), were interpreted as Neutral. Although academic workload and performance expectations emerged as notable stressors, these results indicate that students neither strongly agreed nor disagreed that test-related restlessness and contest pressure significantly contributed to their stress. The composite mean of 3.52, interpreted as Agree, demonstrates that respondents generally experienced moderate levels of academic-related stress.

The findings of this study are consistent with recent research conducted among secondary school students. Academic workload, performance expectations, and challenges with learning tasks have been identified as major sources of student stress. Recent studies indicate that academic pressure is significantly associated with increased stress, anxiety, and emotional exhaustion among high school students (Gao, 2023). Systematic reviews from the past five years further emphasize that homework load and achievement-related pressure remain dominant sources of stress among adolescents (Jagiello, 2025). These results reinforce the present study's conclusions and highlight the need for academic support and stress-management interventions in Thai high schools.

Table 2.2: Overall Level of Stress Experienced by Thai High School Students in Terms of Personal or Emotional Stress

Personal-Emotional Stress	WM	VI
1. I am always panicky when my time could not be managed well.	3.14	N
2. It makes me tense when personal problems interfere with my academic studies.	3.37	N
3. I have pressure or anxiety that is going to be scary.	3.34	N
4. I am stressed when I cannot achieve the level of commitment that I set for myself.	3.72	A
5. I am nervous when I feel that the pressure never lets up.	3.39	N
6. I feel tense if I get very upset with schoolwork.	3.18	N
7. I am juggling far too much in my life.'	3.32	N
8. I am afraid of screwing up or going down in flames.	4.00	A
9. When I do not have friends or teachers who help support me, I feel stress.	2.99	N
10. I feel it is emotionally stressful with the demands of school.	2.79	N
Composite Mean	3.32	N

Table 2.2 presents the overall level of personal-emotional stress experienced by Thai high school students. Among the ten indicators, most items yielded weighted means classified as Neutral, indicating that respondents neither agreed nor disagreed that these emotional factors contributed to stress. Examples include feeling panicky when time is not well managed (WM = 3.14, Neutral), experiencing tension when personal problems

interfere with academic studies (WM = 3.37, Neutral), and feeling emotionally stressed by the general demands of school (WM = 2.79, Neutral).

In contrast, two indicators were interpreted as Agree, reflecting significant emotional stress among respondents: feeling stressed when unable to meet self-imposed standards or commitments (WM = 3.72, Agree) and fear of failure or making serious mistakes (WM = 4.00, Agree). These findings indicate that internal pressures are prominent sources of stress. The composite mean of 3.32, classified as Neutral, suggests a moderate overall level of personal-emotional stress, with specific areas of concern.

These findings align with recent research among secondary school students, which has identified academic workload and performance expectations as prevalent stressors (Haritay, 2025; Academic Stress Interventions, 2024). Previous studies have shown that high academic stress often co-occurs with external expectations, such as parental pressure, thereby intensifying psychological strain (Pienyu, 2024). Additional research has linked academic stress to increased anxiety and emotional discomfort among adolescents (Stromájer, 2023; ResearchGate, 2024). Collectively, these studies highlight the importance of addressing both academic and emotional stressors among Thai high school students.

Table 2.3: Overall Level of Stress Experienced by Thai High School Students in Terms of Social or Environmental Stress

Social or Environmental Stress	WM	VI
1. I am under a lot of stress when I quarrel/fight with my classmates.	2.96	N
2. I stress out in busy or loud school situations.	2.66	N
3. Being left out of social events makes me anxious.	2.44	D
4. I am socially pressured to act a certain way around my peers.	2.85	N
5. The Feelings I Feel Stressed when teachers' rules feel strict.	3.01	N
6. I get stressed seeing my school authorities.	2.06	D
7. I do not have a lot of confidence when it comes to group work or presentations.	2.72	N
8. I get agitated when I cannot get my points across to other students.	2.94	N
9. My standing with colleagues bothers me.	2.86	N
10. The competition in school clubs or activities is putting me under pressure.	2.51	D
Composite Mean	2.70	N

Table 2.3 presents the overall levels of social and environmental stress reported by Thai high school students. The majority of the ten measured indicators were classified as Neutral, with weighted means within the neutral range. For instance, respondents neither strongly agreed nor disagreed about experiencing stress during conflicts with classmates (WM = 2.96, Neutral) or in busy, noisy school environments (WM = 2.66, Neutral). Similarly, perceived social pressure from peers (WM = 2.85, Neutral) and difficulty communicating with other students (WM = 2.94, Neutral) were also rated as neutral. Several items had weighted means below Neutral and were interpreted as Disagree, such as anxiety from social exclusion (WM = 2.44, Disagree), stress when

interacting with school authorities (WM = 2.06, Disagree), and pressure in extracurricular activities (WM = 2.51, Disagree). The composite mean of 2.70, interpreted as Neutral, suggests that respondents experienced a moderate overall level of social or environmental stress.

These results align with recent research indicating that adolescents frequently perceive social environments, such as peer interactions and school contexts, as significant sources of stress, even when these factors do not always produce acute daily stressors. Studies have demonstrated that peer pressure and interpersonal tension are associated with heightened stress responses in school settings, and students without adequate peer support are more vulnerable to social distress (Lan et al., 2023; Sarika et al., 2024). Additionally, differences in social support and classroom dynamics influence students' perceptions and management of environmental stressors (Bezie et al., 2025).

Broader research on adolescent mental health demonstrates that social conditions, including bullying, isolation, and conformity pressure, are significant correlates of stress symptoms among youth and can impact emotional adjustment (World Health Organization, 2025). Longitudinal studies further indicate that persistent social challenges intensify adolescents' emotional responses (Stromájer, 2023). Collectively, these findings suggest that while Thai high school students reported only moderate stress, social context remains a critical factor influencing overall well-being.

Table 2.4: Summary of Overall Level of Stress Experienced by Thai High School Students

Stress	WM	VI
1. Academic-Related Stress	3.52	A
2. Personal-Emotional Stress	3.32	N
3. Social or Environmental Stress	2.70	N
Composite Mean	3.18	N

Table 2.4 presents the overall levels of stress experienced by Thai high school students across three dimensions: academic-related stress, personal-emotional stress, and social or environmental stress. Academic-related stress showed the highest weighted mean (WM = 3.52), verbally interpreted as Agree. This indicates that academic demands were the primary source of stress among respondents. Factors such as academic workload, performance expectations, and challenges with academic tasks significantly contributed to students' stress.

Personal-emotional stress had a weighted mean of 3.32, and social or environmental stress had a mean of 2.70. Both were verbally interpreted as Neutral. These findings show that students experienced emotional and social stressors, but these were less intense than academic stress. The lower mean for social or environmental stress suggests that peer interactions, school authority, and environmental factors were not major stressors for most respondents.

The overall composite mean was 3.18, verbally interpreted as Neutral. This suggests that Thai high school students experienced moderate stress. This pattern aligns with recent studies showing that academic stress is typically the most dominant stressor among adolescents. Emotional and social stressors contribute to varying degrees

depending on individual and contextual factors (Pienyu, 2024; Haritay, 2025). Recent mental health research points out that high school student stress is multifaceted. Academic pressure often interacts with emotional and social factors to influence overall well-being (World Health Organization, 2025; Lan et al., 2023).

These findings highlight the importance of school-based interventions. Schools should prioritize reducing academic stress, supporting students' emotional regulation, and fostering positive social environments.

Research Question 3. Difference on the overall level of stress experienced by Thai high school students when grouped according to profile.

3.1 Difference on the Overall Level of Stress Experienced by Thai High School Students in terms of Academic-Related Stress When Grouped According to Profile

Profile	Mean	Computed Value	p-value	Decision	Interpretation
Grade Level					
Grade 7	3.47	ANOVA Value = 2.599	0.082	Do not Reject the Hypothesis	Not Significant
Grade 8	3.78				
Grade 9	3.40				
Gender					
Male	3.48	T-Test Value = -0.724	0.472	Do not Reject the Hypothesis	Not Significant
Female	3.58				
Family Status					
Divorced/Separated	3.52	T-Test Value = 0.012	0.990	Do not Reject the Hypothesis	Not Significant
Married Parents	3.52				

Note: $p\text{-value} \leq 0.05$ – significant, $p\text{-value} > 0.05$ – not significant

The table presents differences in overall academic stress among Thai high school students, grouped by grade level, gender, and family status. The results indicate that there were no statistically significant differences in academic-related stress across all profile variables.

In terms of grade level, the mean scores indicate that Grade 8 students reported the highest level of academically related stress ($M = 3.78$), followed by Grade 7 ($M = 3.47$) and Grade 9 ($M = 3.40$). However, the one-way ANOVA yielded a p-value of 0.082, which is greater than the 0.05 significance level. Thus, the null hypothesis was not rejected, indicating that the difference in academic-related stress across grade levels was not statistically significant.

Regarding gender, female students had a slightly higher mean score ($M = 3.58$) than male students ($M = 3.48$). Nevertheless, the independent-samples t-test yielded a p-value of 0.472, which exceeds the 0.05 significance level. This result indicates that there

was no significant difference in academic-related stress between male and female respondents.

Similarly, when grouped by family status, both students from divorced or separated parents and those from married parents had the same mean score ($M = 3.52$). The t-test result showed a p-value of 0.990, indicating no statistically significant difference in academically related stress by family status.

Overall, the findings suggest that although slight variations in mean scores were observed across profile groups, academically related stress was experienced at a relatively similar level among students regardless of grade level, gender, or family status. This implies that academic stress is a common experience shared by Thai high school students, rather than one strongly influenced by demographic characteristics.

The results presented in Table 3.1 demonstrate that there were no statistically significant differences in academic-related stress across grade level, gender, or family status. The absence of significant differences by grade level aligns with the findings of Nguyen and Le (2023) and Martinez et al. (2024), who observed similar stress patterns among secondary school cohorts. Likewise, the lack of significant gender differences supports the conclusions of Cho and Moon (2022) and Alonso et al. (2025), who reported that overall school stress did not differ significantly between male and female students, even after controlling for contextual variables. Regarding family status, recent research indicates that academic stress is more strongly shaped by family support than by family structure, as noted by Tran et al. (2023) and Hassan and Arif (2024). Collectively, these studies suggest that academically related stress was a prevalent experience among Thai high school students in this sample, rather than varying substantially across demographic groups.

3.2 Difference on the Overall Level of Stress Experienced by Thai High School Students in terms of Personal or Emotional Stress When Grouped According to Profile

Profile	Mean	Computed Value	p-value	Decision	Interpretation
Grade Level					
Grade 7	3.18	ANOVA Value = 2.254	0.113	Do not Reject the Hypothesis	Not Significant
Grade 8	3.66				
Grade 9	3.24				
Gender					
Male	3.23	T-Test Value = - 0.742	0.460	Do not Reject the Hypothesis	Not Significant
Female	3.40				
Family Status					
Divorced/Separated	3.30	T-Test Value = - 0.162	0.872	Do not Reject the Hypothesis	Not Significant
Married Parents	3.33				

The table presents differences in overall personal-emotional stress levels among Thai high school students, grouped by grade level, gender, and family status. The results indicate that no statistically significant differences in personal-emotional stress were observed across these demographic variables.

In terms of grade level, Grade 8 students recorded the highest mean score ($M = 3.66$), followed by Grade 9 ($M = 3.24$) and Grade 7 ($M = 3.18$). However, the one-way ANOVA yielded a p-value of 0.113, which is greater than the 0.05 level of significance. Therefore, the null hypothesis was not rejected, indicating that differences in personal-emotional stress across grade levels were not statistically significant.

When grouped by gender, female students reported a slightly higher mean score ($M = 3.40$) compared to male students ($M = 3.23$). However, the independent-samples t-test produced a p-value of 0.460, which exceeds the significance threshold. This result indicates that gender did not significantly influence respondents' personal-emotional stress levels.

Similarly, analysis by family status revealed comparable mean scores for students from divorced or separated parents ($M = 3.30$) and those from married parents ($M = 3.33$). The t-test result showed a p-value of 0.872, indicating no statistically significant difference in personal-emotional stress across family statuses.

These findings are consistent with recent empirical research. Studies indicate that personal-emotional stress among adolescents is prevalent across demographic groups and is not consistently influenced by grade level or gender. For example, Cho and Moon (2022) found no significant gender differences in emotional stress among secondary school students when academic pressure and coping resources were taken into account. Similarly, Martinez et al. (2024) reported that emotional stress levels did not differ significantly across grade levels in middle and high school populations.

Regarding family status, recent research suggests that emotional stress is more closely linked to perceived family support than to family structure. Hassan and Arif (2024) emphasized that adolescents from both intact and non-intact families reported similar emotional stress levels when adequate emotional support was present. Additionally, Tran et al. (2023) found that although family disruption may affect emotional well-being, it does not necessarily lead to significant differences in overall emotional stress levels among students.

In summary, the results indicate that personal-emotional stress was experienced at similar levels across grade levels, genders, and family status. This suggests that emotional stress among Thai high school students may be influenced more by shared developmental and academic experiences than by demographic characteristics alone. These findings reinforce the conclusion that personal-emotional stress among Thai high school students is a common experience that transcends demographic categories.

3.3 Difference on the Overall Level of Stress Experienced by Thai High School Students in terms of Social or Environmental Stress When Grouped According to Profile

Profile	Mean	Computed Value	p-value	Decision	Interpretation
Grade Level					
Grade 7	2.66	ANOVA Value = 5.341	0.007	Reject the Hypothesis	Significant
Grade 8	3.14				
Grade 9	2.43				
Gender					
Male	2.81	T-Test Value = 1.306	0.196	Do not Reject the Hypothesis	Not Significant
Female	2.58				
Family Status					
Divorced/Separated	2.73	T-Test Value = 0.206	0.837	Do not Reject the Hypothesis	Not Significant
Married Parents	2.69				

The table presents differences in the overall level of social or environmental stress experienced by Thai high school students, grouped by grade level, gender, and family status. The results revealed a statistically significant difference only when respondents were grouped by grade level, with no significant differences by gender or family status.

By grade level, Grade 8 students reported the highest mean score ($M = 3.14$), followed by Grade 7 ($M = 2.66$) and Grade 9 ($M = 2.43$). The one-way ANOVA yielded a p-value of 0.007, which is less than the 0.05 significance level. Thus, the null hypothesis was rejected, indicating that social or environmental stress significantly differed across grade levels. This finding suggests that students' social and environmental stress experiences vary by grade level, with Grade 8 students experiencing higher stress. This result may be attributed to developmental and school-related transitions that typically occur during middle adolescence, which often involve increased demands on peer interactions, social comparison, and adjustment.

These results align with recent research indicating that social stress peaks during transitional stages of adolescence. Lan et al. (2023) found that peer interaction demands and social adjustment challenges are most pronounced during middle adolescence. Similarly, Sarika et al. (2024) reported that students in transitional grades experience significantly higher peer-related stress than those in lower or higher grades. Martinez et al. (2024) also observed that Grade 8 or equivalent levels are associated with heightened academic expectations and peer comparison, increasing sensitivity to social and environmental stressors. The World Health Organization (2025) further emphasizes that adolescence is characterized by rapid social development, heightening vulnerability to social stress at specific stages of schooling.

In contrast, analysis by gender showed that male students reported a slightly higher mean stress score ($M = 2.81$) than female students ($M = 2.58$), but this difference was not statistically significant ($p = 0.196$). Similarly, no significant difference was

observed by family status, as students from divorced or separated parents ($M = 2.73$) and those from married parents ($M = 2.69$) reported comparable stress levels ($p = 0.837$). These findings indicate that neither gender nor family status significantly influenced social or environmental stress levels.

The lack of significant differences by gender and family status is consistent with recent research indicating that social stress among adolescents is more strongly influenced by school context and peer dynamics than by demographic characteristics. Cho and Moon (2022) and Hassan and Arif (2024) both found that gender and family structure were not significant predictors of social stress when the school environment and peer support were taken into account. Overall, these findings highlight that grade-related school experiences are a primary determinant of social or environmental stress among Thai high school students, rather than gender or family status.

3.4 Difference on the Overall Level of Stress Experienced by Thai High School Students When Grouped According to Profile

Profile	Mean	Computed Value	p-value	Decision	Interpretation
Grade Level					
Grade 7	3.10	ANOVA Value = 3.961	0.024	Reject the Hypothesis	Significant
Grade 8	3.53				
Grade 9	3.02				
Gender					
Male	3.18	T-Test Value = -0.021	0.984	Do not Reject the Hypothesis	Not Significant
Female	3.18				
Family Status					
Divorced/Separated	3.18	T-Test Value = 0.017	0.987	Do not Reject the Hypothesis	Not Significant
Married Parents	3.18				

The table presents differences in overall stress levels among Thai high school students, categorized by grade level, gender, and family status. The results demonstrate that a statistically significant difference in overall stress was observed only by grade level, whereas no significant differences emerged for gender or family status.

Regarding grade level, Grade 8 students reported the highest mean stress score ($M = 3.53$), followed by Grade 7 ($M = 3.10$) and Grade 9 ($M = 3.02$). The one-way ANOVA yielded a p-value of 0.024, indicating significance at the 0.05 level. Consequently, the null hypothesis was rejected, indicating a significant difference in overall stress across grade levels. These results indicate that students' stress experiences differ by grade, with Grade 8 students experiencing the highest levels.

The significant difference among grade levels may be explained by developmental and academic transitions typical of middle adolescence. Grade 8 students frequently encounter increased academic demands, higher performance expectations, and more complex social adjustment challenges, all of which may contribute to elevated stress. This

pattern aligns with earlier findings in this study, which showed that Grade 8 students also demonstrated higher levels of social and environmental stress.

In contrast, when grouped by gender, both male and female students reported identical mean stress scores ($M = 3.18$). The independent-samples t-test yielded a p-value of 0.984, which exceeds the 0.05 significance threshold. Therefore, the null hypothesis was not rejected, indicating that gender did not significantly influence overall stress levels.

Similarly, no statistically significant difference was observed when students were grouped by family status. Both students from divorced or separated parents and those from married parents reported the same mean score ($M = 3.18$), with a p-value of 0.987. This finding indicates that family status was not a determining factor in overall stress levels.

Overall, the findings indicate that grade level is a significant factor influencing overall stress among Thai high school students, whereas gender and family status are not. These results suggest that school-related and developmental factors associated with specific grade levels play a more substantial role in shaping students' stress experiences than demographic characteristics.

The significant difference in overall stress across grade levels is consistent with research demonstrating that school transition phases and developmental stage shifts are key determinants of adolescent stress (Li & Lam, 2023; Yilmaz et al., 2024; Zeng & Fan, 2025). Conversely, the lack of significant differences by gender and family status aligns with studies indicating that these demographic factors are not strong predictors of overall stress when contextual variables such as social support and school environment are considered (Mboka & Sun, 2022; Huang et al., 2023; Perez & Alonzo, 2023; Kaur & Singh, 2024). These findings support global evidence that developmental transitions and school context often have a greater impact on adolescent stress than demographic characteristics (World Health Organization, 2025; National Institute of Mental Health, 2023).

3.5 Post Hoc Analysis for Stress Level of Respondent on Social or Environmental Stress When Grouped According to Grade Level

Variables	Mean Difference	p-value	Interpretation
Grade 7 vs Grade 8	-0.478	0.090	Not Significant
Grade 7 vs Grade 9	0.232	0.494	Not Significant
Grade 8 vs Grade 9	0.711	0.007	Significant

The table presents the post hoc pairwise comparisons following the significant ANOVA result for social or environmental stress across grade levels. The analysis indicated no statistically significant difference in social or environmental stress between Grade 7 and Grade 8 ($p = 0.090$) or between Grade 7 and Grade 9 ($p = 0.494$). In contrast, the comparison between Grade 8 and Grade 9 revealed a significant difference (mean difference = 0.711, $p = 0.007$), demonstrating that Grade 8 students experienced higher levels of social or environmental stress than Grade 9 students.

This pattern suggests that transitional stages within middle school, such as the progression to Grade 8, are particularly associated with heightened perceptions of social

stress. Recent research on adolescence supports this observation, indicating that middle adolescence is a distinct developmental period characterized by increased sensitivity to peer dynamics, social expectations, and school-related pressures.

Yilmaz, Özkan, and Baran (2024) found that students in intermediate grades experienced higher cumulative stress related to peer norms and social evaluation than their lower- and higher-grade counterparts, suggesting that social stress peaks during transitional phases of schooling. Similarly, Lan et al. (2023) reported that peer interaction demands and social adjustment challenges are more pronounced in mid-adolescent groups, which aligns with the significant difference observed between Grade 8 and Grade 9 students in the present study. Zeng and Fan (2025) further emphasized that developmental and school role expectations during mid-adolescence contribute to distinct stress profiles, including increased sensitivity to social pressures.

Additionally, research by Ahmed and Malik (2023) supports the conclusion that social and environmental stressors fluctuate in intensity across adolescence, depending on school stage and psychosocial adjustment needs. Students in transitional grades report higher perceived stress. These findings reinforce the interpretation that the observed significant post hoc difference is likely attributable to developmental transitions and increased social demands characteristic of Grade 8.

Overall, the post hoc results, supported by contemporary research, indicate that grade-specific developmental and social transition factors are important determinants of social or environmental stress among adolescents, particularly during mid-secondary schooling.

3.6 Post Hoc Analysis for Overall Stress Level of Respondents When Grouped According to Grade Level

Variables	Mean Difference	p-value	Interpretation
Grade 7 vs Grade 8	-0.422	0.079	Not Significant
Grade 7 vs Grade 9	0.081	0.890	Not Significant
Grade 8 vs Grade 9	0.503	0.033	Significant

The table presents the results of a post hoc analysis conducted to identify specific grade-level differences in overall stress levels among Thai high school students following a significant ANOVA. Pairwise comparisons were performed among students in Grades 7, 8, and 9.

The comparison between Grade 7 and Grade 8 yielded a mean difference of – 0.422 ($p = 0.079$), indicating no statistically significant difference in overall stress between the groups. Similarly, the comparison between Grade 7 and Grade 9 showed a mean difference of 0.081 ($p = 0.890$), indicating no significant difference in overall stress levels.

In contrast, a statistically significant difference was observed between Grade 8 and Grade 9 students. A mean difference of 0.503 with a p-value of 0.033 indicates that Grade 8 students experienced significantly higher overall stress than Grade 9 students. These findings suggest that the significant variation in stress across grade levels is primarily attributable to elevated stress levels among Grade 8 students.

This finding identifies Grade 8 as a critical period marked by increased vulnerability to stress. Recent studies indicate that middle adolescence is associated with heightened

stress due to overlapping academic demands, psychosocial development, and increased peer and performance expectations. For instance, Lee and Kim (2022) reported that students in middle secondary levels experienced significantly higher overall stress than those in both lower and upper grades, attributing this to adjustment pressures and academic transitions. Similarly, Park et al. (2024) found that stress levels peak during transitional school years, when students encounter intensified academic evaluation and social comparison. Additionally, Sawang et al. (2023) emphasized that cumulative academic and social stressors during middle adolescence contribute to higher overall stress, even as stress levels stabilize in later grades.

These findings support the present study's results and reinforce the conclusion that grade-level transitions, particularly at Grade 8, play a significant role in shaping adolescents' overall stress experiences.

Research Question 4. What program or intervention can be proposed to help reduce stress among Thai high School students?

Framework for a Stress Reduction Program
Program Title: CALM Minds Program
 (Coping, Academic Balance, Life Skills, and Mindfulness)



Introduction

The CALM Minds Program framework was developed to address academic, emotional, and social stressors experienced by Thai high school students. Informed by stress and coping theory, the framework emphasizes the role of adaptive coping strategies in facilitating effective stress management (Skinner & Zimmer-Gembeck, 2020; Compas et al., 2023). Research demonstrates that inadequate academic organization significantly increases student stress, underscoring the need to incorporate elements that foster academic balance, such as study skills and time management (Pascoe et al., 2020). Mindfulness and relaxation activities were included based on evidence that these interventions improve emotional regulation and reduce stress among adolescents (Carsley et al., 2020; Zenner et al., 2022). Life skills and peer-support components were added to address social and environmental stressors, with particular emphasis on Grade 8 students. This

strategy is supported by evidence from the World Health Organization (2021), which identifies social support as a protective factor against stress.

Objectives of the Program

The CALM Minds Program is designed to:

1. Reduce academic-related stress experienced by Thai high school students.
2. Enhance students' coping skills for managing both emotional and academic pressures.
3. Improve students' time management, study habits, and self-regulation skills.
4. Minimize social and environmental stressors, with particular focus on Grade 8 students.
5. Promote a supportive and stress-conscious school environment.

Framework of the Program

A. Objectives, Activities, Timeline, and Evaluation

Reduce academic-related stress	Study skills workshops, time management seminars, and coordination of homework and assessment schedules	Monthly	Pre-test and post-test stress survey
Improve emotional regulation	Stress awareness sessions; Relaxation and breathing exercises; Reflection and journaling	Bi-monthly	Observation checklist; Counseling records
Support Grade 8 students	Peer-support groups; Group counseling; Student mentoring	Whole school year	Reduced stress scores among Grade 8
Reduce social/environmental stress.	Team-building activities; Conflict management workshops	Quarterly	Student perception surveys
Strengthen home–school collaboration	Parent orientation; Distribution of guidance materials	Per semester	Parent feedback and attendance

Timeline of the Program

- **Program Duration:** The CALM Minds Program will be implemented over a period of 8 weeks.
- **Preparation Phase:** Conducted during the first week of the program.
- **Implementation Phase:** Conducted from Week 2 to Week 7 through scheduled sessions and activities.
- **Evaluation Phase:** Conducted during Week 8, including post-assessment and feedback collection.

Budget for the Program

Estimated Budget for the CALM Minds Program

Training Materials	Handouts, worksheets, and printing of modules	3,000
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Workshop Supplies	Stationery, activity materials	2,000
Resource Persons / Facilitators	Honorarium for counselor/guest speaker	5,000
Mindfulness & Relaxation Materials	Mats, audio guides, printed reflection journals	2,500
Parent Orientation Materials	Flyers, handouts, information packets	1,500
Monitoring and Evaluation	Survey forms, printing, documentation	1,000
Total Estimated Budget		15,000 THB

Note: The budget may be sourced from the school's Maintenance and Other Operating Expenses (MOOE), Parent-Teacher Association (PTA) contributions, or local educational support funds. Costs may be adjusted according to the school's available resources.

Program Evaluation

The effectiveness of the CALM Minds Program will be assessed using the following methods:

1. Comparison of **pre- and post-intervention stress survey results**.
2. Monitoring student attendance and participation in program activities.
3. Measurement of reductions in reported stress-related issues and behavioral concerns.
4. Collection of feedback from students, teachers, guidance counselors, and parents.

Expected Outcomes

Following implementation, students are expected to:

- Experience a reduction in academic-related stress.
- Demonstrate improved emotional regulation and enhanced coping strategies.
- Exhibit lower levels of social and environmental stress, particularly among Grade 8 students.
- Develop healthier attitudes toward academic and social demands.

Conclusions

Based on the foregoing findings, the following conclusions were drawn:

1. Demographic Profile of Respondents

1.1 The inclusion of respondents from Grades 7, 8, and 9 ensures a comprehensive representation of junior high school students, allowing for meaningful comparison of stress levels across different developmental stages.

1.2 The relatively balanced gender distribution strengthens the validity of the findings, as it allows for reliable comparison of stress levels between male and female students without significant gender bias.

- 1.3 The high proportion of students from divorced or separated families suggests that many respondents may be exposed to potential family-related stressors, which could influence their emotional and psychological well-being.
2. **Overall Levels of Stress Experienced by Thai High School Students**
 - 2.1. Academic demands are a consistent source of moderate stress, particularly due to workload and performance expectations.
 - 2.2. Thai high school students experience a generally neutral level of personal or emotional stress, with internal pressures such as fear of failure and self-imposed expectations contributing more to stress than other emotional factors.
 - 2.3. Social and environmental factors contribute to moderate stress, though they are not the primary stressors.
 - 2.4. Students generally experience moderate stress, with academic stress as the most dominant dimension.
3. **Differences in the overall stress levels experienced by Thai high school students when grouped by demographic profile.**
 - 1.1. Academic stress is consistently experienced across all demographic groups.
 - 1.2. Emotional stress is uniform across students regardless of profile.
 - 3.3. Grade level influences social/environmental stress, with Grade 8 students experiencing higher stress, possibly due to adjustment challenges and increased peer and academic pressures.
 - 3.4. Overall stress levels vary by grade level, with Grade 8 students experiencing higher stress, possibly due to transitional academic demands and adjustment challenges at the middle stage of secondary education.
 - 3.5. The difference in social stress is specifically between Grade 8 and Grade 9 students, highlighting Grade 8 as a critical stage.
 - 3.6. The difference in overall stress is primarily between Grade 8 and Grade 9 students, confirming Grade 8 as a key stress point.
4. A program entitled “CALM Minds Program: A Framework for a Stress Reduction Program (Coping, Academic Balance, Life Skills, and Mindfulness)” is proposed to address the moderate levels of stress experienced by Thai high school students.

Recommendations

- Based on the study's conclusions, the following recommendations are proposed:
1. School administrators should prioritize the development and implementation of comprehensive stress management programs, such as the CALM Minds Program, to reduce academic pressure and promote student well-being.
 2. The curriculum should integrate mindfulness-based and life-skills programs to help students develop effective coping mechanisms for academic, emotional, and social stress.
 3. Teachers should adopt supportive instructional strategies, including balanced workload planning, flexible assessment methods, and clear academic expectations, to minimize academic-related stress.

4. Academic support systems should be strengthened through study skills training, time management workshops, and coordinated scheduling of academic tasks to reduce excessive workload.
5. Guidance counselors and school psychologists should provide targeted interventions, particularly for Grade 8 students, through counseling sessions, peer-support programs, and social skills development activities.
6. Peer-support and mentoring programs should be established to enhance students' sense of belonging and reduce social and emotional stress.
7. Parents and guardians should be encouraged to provide consistent emotional support and maintain open communication with their children, especially during transitional grade levels.
8. Professional development programs for teachers should be conducted to enhance their ability to recognize signs of student stress and implement classroom-based stress reduction strategies.
9. Regular monitoring and evaluation systems should be implemented using validated assessment tools to measure students' stress levels and assess program effectiveness.
10. Future researchers are encouraged to conduct longitudinal and expanded studies to examine stress trends across grade levels and explore additional variables such as coping strategies, resilience, socioeconomic status, and social support systems.

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