



The Relationship between University Entrance Preparation Awareness and Stress among Upper Secondary Students in University Entrance Information Networks

Peerawat Akarachaipak¹, Tanawat Wongwad² and Punnarat Iamin³

¹Ramathibodi School of Nursing, Faculty of Medicine Ramathibodi Hospital, Mahidol University

²Computer Engineering Department, Faculty of Engineering, Mahidol University

³Navaminthrachinuthit Satriwitthaya Putthamonton School

*Corresponding Author, e-mail: tepan.aka@gmail.com

Abstract

This study examined the levels of university entrance preparation awareness and academic stress among upper secondary school students in Thailand, and the relationship between these variables. A quantitative design was employed with 400 students preparing for exams under the Thai University Central Admission System (TCAS), selected via convenience sampling. Data were collected using structured questionnaires including a 25-item Awareness Scale and a 15-item Academic Stress Scale, both rated on a 5-point Likert scale, and analyzed using descriptive statistics, Pearson's correlation, and Cronbach's alpha. Results indicated high awareness of university entrance preparation (mean 3.58-4.22, $\alpha = 0.9339$) and moderate academic stress (mean 2.37-3.84, $\alpha = 0.9061$). A moderate negative correlation was found between awareness and stress ($r = -0.3296$, $r^2 = 10.86\%$, $p \leq 0.05$), suggesting that higher awareness is associated with lower stress. These findings highlight the importance of promoting systematic preparation awareness to mitigate academic stress, and recommend guidance programs and life skill activities starting from Grade 10 to enhance time management, stress coping, and psychological resilience. Future research is suggested to examine additional psychosocial factors and diverse student populations to strengthen understanding of factors influencing academic stress.

Keywords: Academic Stress, Awareness of Preparation, University Entrance Preparation, Upper Secondary Students

Introduction

In the contemporary era, academic competition particularly the university entrance examination process has become significantly more intense and complex. In Thailand, the current centralized admission system, known as the Thai University Central Admission System (TCAS), was designed to accommodate students' diverse talents and competencies. It bears similarities to the direct admission system used in the United States (Jieranai, 2012). However, TCAS has had profound psychological effects on high school students, particularly in relation to academic stress. This stress stems from various sources, including personal expectations, family and societal pressures, and the ever-evolving structure of the entrance system (Manee & Pontanya, 2020). As a result, a growing number of students face mounting burdens from preparation activities such as enrolling in private tutoring, participating in skill-building camps, undergoing standardized assessments, and compiling portfolios. These demands require considerable investments of time and energy and directly affect students' mental health and overall quality of life especially among those lacking planning skills, self-regulation, or effective emotional control.

Moreover, the digital information environment where students have easy access to exam strategies and preparation resources further exacerbates stress by fostering constant social comparison. When students perceive themselves as less capable than their peers, feelings of inadequacy can intensify, leading to widespread chronic stress among Thai high school students (Prakob & Siriloadjanamanee, 2024). Against this backdrop, awareness of university entrance preparation emerges as a critical educational-psychological factor that deserves scholarly attention. This awareness may play a dual role in both mitigating and amplifying stress. On one hand, students with appropriate levels of awareness are more likely to plan their preparation systematically, understand the application process, and manage their time effectively potentially reducing their stress levels. On the other hand, excessive awareness especially when accompanied by constant comparison with others can result in heightened anxiety and cumulative stress (Suranaowarat et al., 2021).

A study by Chitthanakornnukur and Sonthirat (2022) found that stress management among students was significantly associated with social support and their ability to cope with academic pressure, especially during the transition to higher education a critical period marked by future-defining decisions. Multiple studies, both domestic and international, have also linked entrance exam-related stress with academic burnout, depression, and other mental health challenges (Aeksanti et al., 2023; Chulakadabba et al., 2021). These issues extend beyond the students themselves, affecting families and caregivers

whose attitudes and behaviors significantly influence students' psychological well-being (Thanakhamdee et al., 2019).

While prior research has extensively explored academic stress and its associated factors among high school students, few studies have specifically examined the relationship between awareness of university entrance preparation and stress levels within the rapidly evolving TCAS framework. Moreover, there is a lack of research focused on students who are in the actual period of preparation arguably the most emotionally and behaviorally dynamic phase.

To address this gap, the present study was designed within a conceptual framework that links two critical variables: students' awareness of university entrance preparation and their levels of academic stress. This framework is grounded in two theoretical perspectives: the concept of academic stress, which attributes stress in high school students to personal and external expectations as well as systemic and societal factors and the concept of awareness of preparation, which refers to the extent to which students recognize and understand the application process and evaluate their readiness in alignment with their educational goals (Prakob & Siriloadjanamane, 2024). These constructs are interrelated within the broader context of learning psychology, with prior studies suggesting that awareness may influence stress both positively and negatively depending on individual perception and interpretation (Sophoworakij & Sughondhabirum, 2019).

Research objectives

1. To examine the level of university entrance preparation awareness among upper secondary school students.
2. To investigate the level of academic stress related to university entrance preparation among upper secondary school students.
3. To analyze the relationship between university entrance preparation awareness and academic stress among upper secondary school students.

Methodology

This study employed a quantitative research design, aiming to examine the relationship between students' awareness of university entrance preparation and their levels of academic stress among upper secondary school students. The methodology consisted of the following components.

Population and Sample

The population of this study comprised high school students who were actively preparing for university entrance exams under the Thai University Central Admission System (TCAS). Due to the limited accessibility of students during this preparation period, convenience sampling was employed. This method was chosen because it allows the researcher to collect data efficiently from participants who are readily available and willing to participate, which is particularly suitable given the time-sensitive nature of exam preparation.

To determine the appropriate sample size, Yamane's Formula (Yamane, 1967) was applied with a 95% confidence level and a 5% margin of error. This ensured that the selected sample was adequate and representative of the target population while remaining practical for data collection under the constraints of accessibility and timing.

$$n = \frac{N}{1 + Ne^2}$$

n = sample size

N = population (3,458)

e = margin of error (0.05)

Based on the calculation, a total sample size of students required for data collection were at least 359 students. But, in actual collection we used 400 students to be the actual simple size. Can be classified by Level, Gender and Type of School as Table 1.

Table 1 Demographic Characteristics of the Respondents.

Gender and Level	Public School	Private School	International School	Demonstration School
Grade 10 Male	19	4	1	1
Grade 11 Male	32	8	3	3
Grade 12 Male	63	16	7	5
Grade 10 Female	62	8	1	3
Grade 11 Female	44	11	2	2
Grade 12 Female	86	9	7	3

Research Instruments

The research instrument was a structured questionnaire divided into three sections. Section 1) Demographic Information This section included general information about the respondents such as gender, grade level, and type of school. Section 2) University Entrance Preparation Awareness Scale Comprises 25 items measuring students' awareness of university entrance preparation, using a 5-point Likert scale (1 = Strongly Disagree, 5 = Strongly Agree). Section 3) Academic Stress Scale Comprises 15 items measuring academic stress related to university entrance preparation also using a 5-point Likert scale (1 = Strongly Disagree, 5 = Strongly Agree). Data were collected between June 10 and June 23, 2025.

Data Analysis

1. Descriptive Statistics were used to analyze the demographic characteristics of the participants, including mean (M) and standard deviation (SD), to describe the overall sample.

2. To examine the relationship between variables, Pearson's correlation coefficient (r) (Turney, 2022) was used to assess the correlation between total scores from the University Entrance Preparation Awareness Scale and the Academic Stress Scale. The r value ranges from -1 to +1, with interpretations as follows: $r > 0$ indicates a positive correlation, $r < 0$ indicates a negative correlation, $r = 0$ indicates no correlation.

Instrument Validation

The reliability of the two research instruments the University Entrance Preparation Awareness Scale and the Academic Stress Scale was assessed using Cronbach's alpha coefficient (Cronbach, 1951). This statistic measures the internal consistency of the items within each instrument. For the purposes of this study, a Cronbach's alpha (α) value of 0.90 or above was considered acceptable.

Data Presentation

1. Descriptive statistical tables were employed to present the results of the two questionnaires. These tables include mean scores (M) and standard deviations (SD) providing insight into the behavioral tendencies and psychological characteristics of the sample population and classified level of each question into 5 scales (1.000-1.800 = Very Low, 1.801-2.600 = Low, 2.601-3.400 = Medium, 3.401-4.200 = High, 4.201-5.000 = Very High).

2. Scatter plots were utilized to illustrate the behavioral and psychological trends between students' awareness of university entrance preparation and their levels of academic stress. Data points were color-coded by grade level to enhance visual distinction. Trend lines in corresponding colors were

added to the graphs to support interpretation. Each plot also included the Pearson's correlation coefficient (r) and the p -value to confirm the statistical significance and reliability of the results.

Ethical Considerations

In conducting this research, the rights and well-being of all participants were rigorously protected. All participants received clear information regarding the purpose of the study, the procedures involved in responding to the questionnaire, and their right to voluntarily participate or decline participation without any negative consequences. The questionnaire was fully anonymous, included no collection of personally identifiable information, and contained no sensitive or potentially distressing questions, ensuring strict confidentiality and minimizing risks to participants. All data obtained were used solely for academic and research purposes. Based on the minimal-risk nature of this study and the type of data collected, ethical approval from an Institutional Review Board (IRB) was not required, in accordance with the relevant regulatory announcement. The researcher strictly adhered to ethical principles in human research to protect the rights, dignity, and autonomy of all participants throughout the research process. (Office of Research Ethics, 2016)

Research results

1. The analysis revealed that the mean scores for each item on the awareness scale ranged from 3.58 to 4.22 (p -value < 0.05), indicating a consistently high level of university entrance preparation awareness among upper secondary school students. The highest mean score was associated with awareness of target faculty score requirements, suggesting that students are well-informed about competitive academic benchmarks. Conversely, the lowest mean score while still within the high level related to time management for exam preparation, indicating that some students may require additional support in planning their preparation effectively. These findings directly address the first research objective, to examine the level of university entrance preparation awareness among upper secondary school students. by demonstrating that students generally possess strong awareness across essential dimensions relevant to university admission preparation. The reliability of this instrument, assessed using Cronbach's alpha, yielded a coefficient of 0.9339, indicating excellent internal consistency. Detailed item-level results are presented in Table 2.

2. The mean scores for the academic stress scale items ranged from 2.37 to 3.84 ($p < 0.05$), indicating varying levels of academic stress associated with different aspects of university entrance preparation among upper secondary school students. The highest mean score reflected persistent anxiety regarding the university entrance examination, highlighting that performance pressure remains

a primary source of stress. In contrast, the lowest mean score within a relatively low range was associated with thoughts of dropping out due to academic pressure, suggesting that while students experience stress, most remain motivated to pursue higher education. These results provide empirical evidence addressing the second research objective, to investigate the level of academic stress related to university entrance preparation among upper secondary school students, by confirming that students experience differentiated levels of stress depending on specific preparation-related demands. The instrument demonstrated high reliability with a Cronbach's alpha (α) of 0.9061, confirming strong internal consistency across items, as detailed in Table 3.

3. The analysis revealed a moderate negative correlation between students' awareness of university entrance preparation and their levels of academic stress. With a sample size of 400 participants, the Pearson's correlation coefficient was $r = -0.3296$ ($p\text{-value} < 0.05$), demonstrating a statistically significant inverse relationship. The coefficient of determination ($r^2 = 0.1086$) suggests that approximately 10.86% of the variance in academic stress can be explained. The calculated t-value was 6.965, confirming the significance of the relationship. These findings directly address the third research objective, to examine the relationship between university entrance preparation awareness and academic stress among upper secondary school students, by indicating that higher levels of awareness are associated with lower levels of academic stress during the preparation process for university entrance. The scatter plot visualization, grouped by grade level with distinct trend lines (Grade 10: blue, Grade 11: green, Grade 12: red), further illustrates the consistent negative relationship across all grade levels. Full statistical results and graphical representations are shown in Figure 1.

Table 2 Results of the University Entrance Preparation Awareness Scale.

Question About University Entrance Preparation Awareness	M	SD	Level	p-value
1. You are familiar with all the steps of the TCAS system.	3.730	0.946	High	< 0.05*
2. You can plan your exam preparation in an organized manner.	3.705	0.991	High	< 0.05*
3. You regularly keep up with news about university admissions.	3.980	1.016	High	< 0.05*
4. You understand how the admission criteria differ in each TCAS round.	3.933	1.040	High	< 0.05*
5. You understand and know which exam scores are required for each round.	4.053	1.004	High	< 0.05*
6. You can manage your study time according to your exam goals.	3.583	1.085	High	< 0.05*
7. You understand what content a good portfolio should include.	3.898	1.020	High	< 0.05*
8. You have sought advice from a guidance counselor regarding university admissions.	3.743	1.248	High	< 0.05*
9. You know whether you need TGAT/TPAT, A-LEVEL, or other scores to apply for your target faculty.	4.220	0.964	Very High	< 0.05*
10. You are familiar with the websites or sources of information for applications.	4.123	1.018	High	< 0.05*
11. You understand the advantages and disadvantages of applying in each TCAS round.	3.898	1.098	High	< 0.05*
12. You plan ahead at least three months in advance.	3.978	1.080	High	< 0.05*
13. You know which documents are required for the application process.	3.790	1.166	High	< 0.05*
14. You can explain to others how the university admission system works.	3.620	1.239	High	< 0.05*
15. You assess your readiness before selecting your target faculty or program.	3.965	1.048	High	< 0.05*
16. You review past exam papers or consult seniors in the faculty/program you are interested.	3.820	1.199	High	< 0.05*
17. You have a clear backup plan in case you miss your target faculty.	3.838	1.239	High	< 0.05*
18. You prepare your portfolio in advance.	3.765	1.225	High	< 0.05*
19. You understand the TGAT/TPAT and A-LEVEL examination systems.	3.915	1.105	High	< 0.05*
20. You can appropriately prioritize between extracurricular activities and studying.	4.088	0.979	High	< 0.05*
21. You are interested in or have participated in workshops for university preparation.	4.058	1.146	High	< 0.05*
22. You understand how to choose a faculty or program that matches your abilities.	4.125	1.036	High	< 0.05*
23. You can manage your time effectively during the exam period.	3.730	1.084	High	< 0.05*
24. You know and study the admission trends and score requirements of your target faculty/program each year.	3.998	1.040	High	< 0.05*
25. You believe your goals are suitable for your potential.	4.013	0.998	High	< 0.05*

(Constant (α) = 0.9339, $p \leq 0.05$)* A significance level of 0.05 ($p \leq 0.05$)

Table 3 Results of the Academic Stress Scale Related to University Entrance Preparation.

Question About Academic Stress	M	SD	Level	p-value
1. You constantly worry about university entrance exams.	3.835	1.137	High	< 0.05*
2. You have trouble sleeping because of concerns about studying and exams.	3.020	1.216	Medium	< 0.05*
3. You feel that you do not get enough rest during exam preparation.	3.263	1.354	Medium	< 0.05*
4. You experience headaches or stomachaches before exams.	2.860	1.417	Medium	< 0.05*
5. You feel that your family's expectations increase your pressure.	2.933	1.419	Medium	< 0.05*
6. You worry that people around you will be disappointed if you fail to get into your target faculty.	3.290	1.462	Medium	< 0.05*
7. You feel stressed when you see your friends preparing more than you.	3.358	1.406	Medium	< 0.05*
8. You believe you have no chance of getting into your target faculty.	2.540	1.226	Low	< 0.05*
9. You feel discouraged from studying.	2.843	1.320	Medium	< 0.05*
10. You feel exhausted from studying and preparing for exams.	3.280	1.410	Medium	< 0.05*
11. You cannot concentrate when studying.	2.803	1.330	Medium	< 0.05*
12. You have thought about quitting school because of the pressure.	2.373	1.345	Low	< 0.05*
13. You feel that you are not making enough effort to prepare for university entrance.	3.195	1.381	Medium	< 0.05*
14. You feel stressed when thinking about preparing for university entrance.	3.455	1.343	High	< 0.05*
15. You have compared yourself to others to the point of feeling bad about yourself.	3.263	1.360	Medium	< 0.05*

(Constant (α) = 0.9061, $p \leq 0.05$)

* A significance level of 0.05 ($p \leq 0.05$)

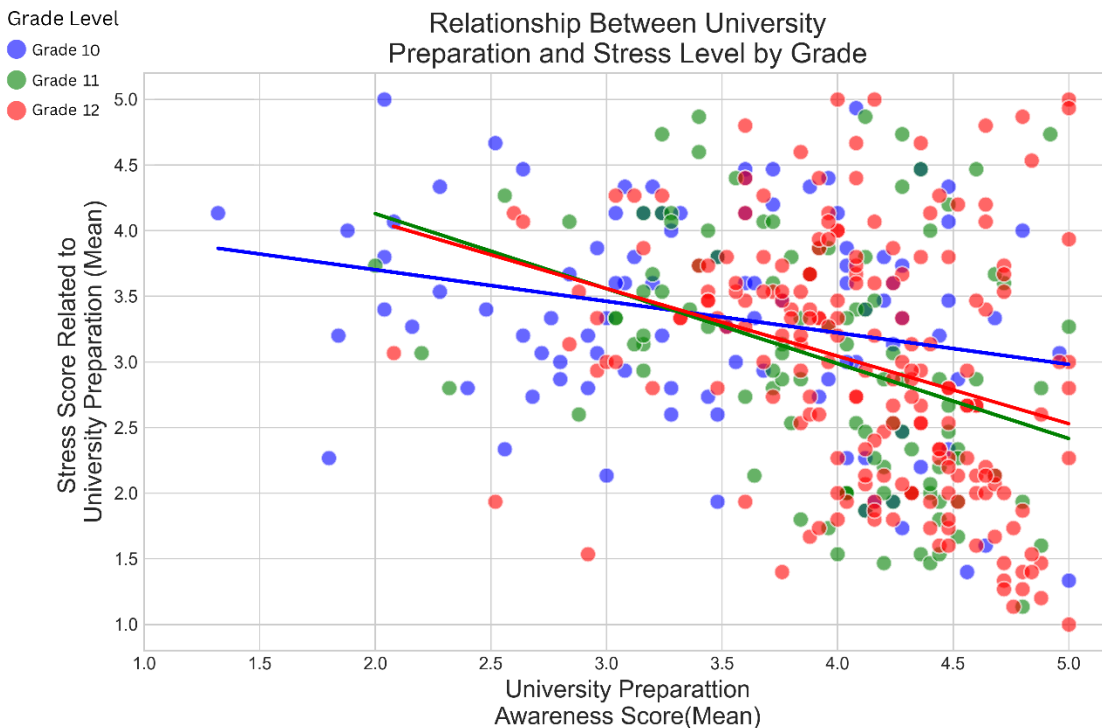


Figure 1 Correlation Analysis Between University Entrance Preparation Awareness and Academic Stress Using Scatter Plot

($n = 400$, $r = -0.3296$, $r^2 = 0.1086$, $t = 6.965$, $p \leq 0.05$)

* A significance level of 0.05 ($p \leq 0.05$)

Discussion

The findings of this study indicate that students' awareness regarding university entrance preparation was generally high, with mean scores ranging from 3.58 to 4.22 ($p < 0.05$). Notably, the highest mean scores pertained to awareness of the "required scores for target faculties." This finding reflects that contemporary students effectively access systematic information about the TCAS system, which aligns with Kasemsarn (2014) assertion that clear information about universities and selection systems has influences decision-making among high-achieving and well-planned students in Bangkok. However, the lowest mean score although still at a high level was related to time management for study, suggesting that students possess knowledge but may lack systematic implementation. This observation corresponds findings from Prasertla and Intarakamhang (2014), Sophoworakij and Sughondhabirrom (2019) which highlight students who are cognitively prepared but have yet to translate

their awareness into consistent behaviors. Thus, awareness may not directly correlate with actual behavioral outcomes.

Regarding academic stress, the students' stress levels varied across dimensions. The highest mean score was on "constant worry about the university entrance exam," reinforcing the analysis by Murnpho and Kitmunkong (2024), who posited that the expectations imposed by the Thai educational system and society are enduring sources of stress for learners. This stress is characterized as "structural chronic stress" rather than a transient phenomenon. Conversely, the lowest mean score concerned "considering quitting school due to pressure," which remained low, indicating that most students, despite facing pressures, maintain firm goals and determination to continue their education. This finding is consistent with Tossungnoen et al. (2021), who reported high resilience among Thai students in crisis situations when provided support.

The Pearson correlation coefficient ($r = -0.3296$, $p < 0.05$) and coefficient of determination ($r^2 = 10.86\%$) indicate a moderate negative relationship between awareness and academic stress. This finding aligns with Saithanu and Srisuwan (2024), who demonstrated that interventions or programs aimed at psychological resilience can reduce stress and depression. It suggests that "preparation" encompasses not only academic readiness but also mental readiness that can be fostered through learning activities. Additionally, scatter plot trends demonstrated consistent negative relationships across all grade levels (Grades 10-12), suggesting that stress affects not only final-year students but also those in earlier secondary years. This challenges the current guidance system that primarily focuses on the final year. Phunturad et al. (2024), Promsen et al. (2022) emphasized that preparatory efforts should start in the early years of secondary education to ensure continuous learning planning to reduce psychological resistance over time.

Despite the high reliability of the questionnaires (Cronbach's $\alpha = 0.9339$ for awareness and 0.9061 for stress), limitations remain in measuring actual behaviors due to the self-report nature of the instruments, which may introduce bias. Specifically, students may underreport or overestimate their own stress and awareness levels because of self-perception bias or a desire to present themselves more favorably. Furthermore, the low r^2 value (10.86%) indicates that 89.14% of the variance in stress levels remains unexplained. Nevertheless, this low r^2 should not be disregarded, as it still reveals systematic trends and demonstrates that students' awareness of university entrance preparation plays a meaningful role in mitigating academic stress. Recognizing this trend is valuable for informing educational policies, guidance programs, and mental health promotion initiatives. Moreover, the low r^2 reflects the complexity of academic stress, which is influenced by multiple factors, such as family context

(Kasemsarn, 2014), the evolving TCAS system, and Thailand's outcome focused learning culture illustrated, for example, Gaokao system in China (Urnorakankij, 2018), highlighting the need for a multidimensional approach to understanding and addressing student stress.

Recommendations

Recommendation for implementation

Results suggest that systematically promoting awareness of university entrance preparation can be reducing academic stress among Upper secondary students. Schools should implement comprehensive and modern guidance programs beginning in Grade 10 to provide timely information, reduce accumulated stress, and encourage purposeful life planning. Although some students exhibit high awareness, many lack time management and stress coping skills. Therefore, integrating life skills such as goal setting and life balance into supplementary extracurricular is recommended. Persistent anxiety levels highlight the need for effective and accessible psychological counseling services to prevent and support at-risk students appropriately.

Recommendation for further research

It is recommended that future studies incorporate additional psychosocial variables, such as family and peer support, emotion regulation, and resilience, which may influence the relationship between students' awareness of university entrance preparation and academic stress. Moreover, expanding the target population to include students from rural schools, private institutions, under-resourced regions, or those not participating in guidance programs, while employing random sampling and avoiding restriction to specific subgroups, could enhance the accuracy and generalizability of the findings. In addition, the use of quasi-experimental or true experimental designs may provide stronger evidence of causal relationships and mitigate the limitations inherent in self-report measures. Overall, these approaches would support the development of more effective guidance programs, mental health initiatives, and evidence-based educational policies tailored to the diverse needs of students within Thailand's evolving educational context.

References

- Aeksanti, T., Anonjarn, K., Satayavongthip, B., Nuktumkawean, R., Tujamroon, W., & Panil, A. (2023). Stress levels and stress management related to pursuing higher education among Matthayomsuksa 6 students. *Journal of Nursing and Health Research*, 24(3), 18-31.

- Chitthanakornnukur, N., & Sontirat, S. (2022). Social Support, Coping with Stress and Academic Success of Mathayomsuksa 6 Student, at Saint Gabriel's Collage. *The Journal of Pacific Insitute of Management Science of Management Science*, 8(2), 630-647.
- Chulakadabba, S., Hosiri, T., & Dumrongpiphatkul, N. (2021). Stress and Depression Among Students' Parents in Preparation for University Admission. *Thai Journal of Clinical Psychology*, 52(1), 31-40.
- Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, 16(3), 297-334. <https://doi.org/10.1007/bf02310555>
- Jieranai, W. (2012). Selection of individuals for further study in higher education institutions in the United States. *Academic Journal of Thailand National Sports University*, 4(2), 81-94.
- Kasemsarn, K. (2014). Factors Influencing Bangkok's High School Students to Study in Public Universities. *Asian Creative Architecture, Art and Design*, 16(1), 189-202.
- Manee, T., & Pontanya, A. (2020). CAUSAL RELATIONSHIP MODEL OF FACTORS AFFECTING STUDY-RELATED BURNOUT AMONG HIGH SCHOOL STUDENTS. *Journal of Education and Innovation*, 24(2), 136-147.
- Murnpho, S., & Kitmunkong, K. (2024). Stress Affecting the Quality of Life of Students in Education Institutions. *LAS: Liberal Arts, Science and Technology*, 1(2), 80-93.
- Office of Research Ethics. (2016, October 3). *Exemption from Ethical Review*. Retrieved from Research Insitute of Health Research: <https://www.rihes.cmu.ac.th/ore/?p=921>
- Phunturad, N., Khumsiri, N., Kiawkham, S., & Anusurain, P. (2024). Influencing Factors in the Decision to Decline Admission to Khon Kaen University under the TCAS System for the Academic Year 2023. *KKU Research Journal Humanities and Social Science*, 12(3), 91-101.
- Prakob, J., & Siriloadjanamanee, A. (2024). A Study of Stress of Grade 12 Students to Take the University Admission Examination in 2024 in Private Schools, Chiang Mai Province. *The Journal of Insitute of Trainer Monk Development*, 7(2), 208-218.
- Prasertla, J., & Intarakamhang, U. (2014). PSYCHOLOGICAL AND SITUATIONAL FACTORS RELATED TO THE BEHAVIORS OF CONTINUING EDUCATION PREPARATION IN PUBLIC AMONG STUDENTS WHO BELONG TO DEPARTMENT OF EDUCATION BANGKOK METROPOLITAN ADMINISTRATOR. *UMT Poly Journal*, 11(2), 11-16.
- Promsen, C., Khrutpan, W., & Shiangjen, K. (2022). OPINION TOWARD FACTORS AFFECTING ADMISSION WAIVING DECISION FOR UNDERGRADUATE LEVEL AT UNIVERSITY OF PHAYAO FOR AN ACADEMIC YEAR OF 2022. *Journal of Liberal Art of Rajamangala University of Technology Suvarnabhumi*, 4(3), 534-544.

- Saithanu, K., & Srisuwan, K. (2024). THE EFFECTS OF RESILIENCE ENHANCEMENT PROGRAMME ON RESILIENCE QUOTIENT AND MENTAL HEALTH AMONG NURSING STUDENTS. *The Journal of Psychiatric Nursing and Mental Health*, 38(1), 15-30.
- Sophoworakij, N., & Sughondhabirrom, A. (2019). Effect of self-awareness training program on 5 factors of mindfulness and stress to patients with amphetamine use disorder. *Journal of Medical Bioscience*, 1(6), 625-633.
- Suranaowarat, P. W., Dista, I., & Choojam, S. (2021). Anxiety - Related Factors among High School Students Preparing for University Admission during COVID-19 Pandemic in Thailand. *International Journal of Science and Research*, 10(10), 1215-1218. <https://doi.org/10.52403/ijrr.20211245>
- Thanakhamdee, S., Sriyong, M., & Hongyantrachai, T. (2019). Family Communication Patterns and Stress Of Students Who Have To Continue Studies In University. *Journal of Bamrasnaradura Infectious Diseases Institute*, 4(3), 1-10.
- Tossungnoen, B., Tungpunkom, P., & Sethabouppha, H. (2021). EFFECT OF THE RESILIENCE ENHANCEMENT PROGRAM ON STRESS OF STUDENTS PREPARING FOR UNIVERSITY ADMISSION EXAMINATION DURING THE PANDEMIC OF COVID-19. *The Journal of Psychiatric Nursing and Mental Health*, 35(3), 170-185.
- Turney, S. (2022, May 13). *Pearson Correlation Coefficient (r)*. Retrieved from Scribbr: <https://www.scribbr.com/statistics/pearson-correlation-coefficient/>
- Urnorakankij, C. (2018). China's College Entrance Examination (GAOKAO): A Perspective of Power. *Panyapiwat Journal*, 10(1), 279-288.
- Yamane, T. (1967). *Statistics: An Introductory Analysis* (2nd Edition). Harper and Row.