



## The Correlation between Study Behavior and Depression among Thai and International High School Students in Bangkok

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**ABSTRACT:** Depression significantly impacts people's behavior and relationships with their loved ones by negatively influencing their emotions and actions. In Bangkok, there is an increasing prevalence of depression among Thai and international high school students due to variances in study habits. Thus, we conducted cross-sectional survey research to determine the correlation between study behavior and depression in Thai high school students. An online questionnaire was employed in this study to gather information on the study habits, including time management, of Thai and international students. To determine if study habits among Thai and international students are associated with depression, we employed the standard deviation, Ttest, and Pearson Correlation Coefficient. According to the information we have obtained, we have discovered that Thai high school students are more likely than international students to experience depression, which strongly shows that their academic curriculum is significantly more strenuous and stressful (p-value of 5.58). The outcomes of this study should aid in advancements in education and mental health research by promoting therapies, educational practices, and interventions by analyzing teenage problems, academic stress, and mental health.

**KEYWORDS:** Depression, Mental health, Study behavior, Time management.

### INTRODUCTION

Depression is a mental health disorder characterized by various emotional and physical symptoms, including a loss of interest in or pleasure from activities, persistent feelings of sorrow, and other symptoms. It can significantly impact an individual's behavior, relationships with family and friends, and outlook. In recent years, depression has been a growing concern in Thailand, particularly among Thai and international high school students in Bangkok. According to Dr. Apirchart Jariyavilas, about 1.5 million Thai youths aged over 15 suffered from depression in 2021, and the number of depression and psychological disorder cases in Thailand is increasing by 1-2% each year [1]. Although the rate in Thailand ranges from 12%, lower than the 10% in the United States and Europe, it is increasing due to the growing number of patients seeking medical counseling or treatment. Consequently, every hour, six patients attempt suicide, reaching a staggering number of 53,000 cases a year with approximately 4000 fatalities [1].

It is crucial to understand the growing issue between study behavior and depression among Thai and international high school students. By analyzing how study behavior, such as academic pressure, study habits, and sleep patterns, influences the prevalence of depression among Thai and international high school students in Bangkok, we can gain valuable insights into the personal challenges they face, such as parental expectations and people's inability to understand their emotions or feelings. Thai and international high school students in Bangkok differ in curriculum, activities, and lifestyle; thus, we are interested in whether there is a correlation between study behavior and depression, and we decided to perform this experiment by focusing on these groups of students.

International schools fall into four main types of curriculums: American, British, International Baccalaureate, and other national curricula. In international schools, foreign languages are used as the medium of teaching and learning process, and there is more freedom and flexibility besides school reputation and academic performance [2]. On the other hand, lower and upper secondary students at Thai schools must achieve 41 credits in core subjects, where one credit is equivalent to 40 hours of classes per semester, and the school system is developed locally with a strong focus on Thai culture and values [3]. Moreover, it can be noted that the prevalence of mild to extremely severe symptoms of depression, anxiety, and stress scores was 54.3, 67.0 and 43.8%, respectively, among Thai male students classified as poor sleepers [4], indicating a strong link between mental health and sleeping habits. The



results of this study will guide the creation of focused interventions and support systems by establishing a supportive learning environment that encourages student success and well-being.

**METHOD**

To investigate the relationship between study behavior and depression, we used a qualitative research methodology. Throughout the research process, ethics will be taken into account to ensure informed consent and confidentiality. A Google Forms questionnaire containing 23 questions was developed to study behavior and depression in Bangkok between Thai and International high schools. It was sent to high school students in Bangkok from June 11th to June 25th, 2023, by Line, Instagram, and Twitter, obtaining 216 participants. Their submissions were used to process and analyze data on their study habits and depressive symptoms. The survey is divided into three sections: 1) General information, 2) Depressing assessment, and 3) Time management [5]. The 4-point Likert scale (i.e., from (1) not at all to (4) nearly every day) and 5point Likert scale (i.e., from (1) strongly disagree to (5) strongly agree) were used as options in the questionnaire. After obtaining the data, the correlation between study behavior and depression was further investigated using statistical analysis, such as correlation analysis and regression models. Three specialists reviewed our questions to obtain an Item-Objective Congruence (IOC) index of 0.5 [6]. The internal reliability test of the questionnaire was determined using Cronbach’s Alpha obtained from pilot testing of 19 participants, which was 0.75 [7]. Statistical analyses were performed using Statistical Product and Service Solutions (SPSS) version 29.

**RESULTS**

**Table I:** General information of participants. (N = 216)

Personal information	Frequency	Valid Percentage
<b>Gender</b>		
Male	80	37.0
Female	136	63.0
<b>Total</b>	216	100.0
<b>School</b>		
Thai School	164	75.9
International School	52	24.1
<b>Total</b>	216	100.0
<b>Grade</b>		
Grade 10	41	19.0
Grade 11	46	21.3
Grade 12	129	59.7
<b>Total</b>	216	100.0

According to Table 1 indicates the detail of the sample collected. Most of the population is female, comprising 136 people (63.0%). Generally, the participants studying at Thai schools comprised 164 people (75.9%). Most students were in grade 12 counting in 2023, consisting of 129 people (59.7%), the number of students who study in Grade 11 is the second highest (21.3%), followed by Grade 10 (19.0%).

**Table II:** Descriptive statistics (Mean and Standard Deviation)

Variable	Mean	Std. Deviation	N
Depression	2.20	0.74	216
Time management	3.27	0.75	216



According to Table 2, the table displays each variable's mean score and standard deviation of each variable. The mean of depression was 2.20. For time management, the mean was 3.27. The standard deviation for depression is 0.74 and the standard deviation for time management is 0.75. Moreover, their means and standard deviations were calculated from the same group of participants

**Table III:** The correlation between the time management and the status of depression of high school students in Bangkok,

		Depression	Time management
Depression	Pearson's Correlation	1	-0.284**
	Sig. (2-tailed)	-	<0.001
	N	216	216

\*\* . Correlation is significant at the 0.01 level (2-tailed).

According to Table 3, at the significant level of 0.01, the Pearson's correlation test revealed that the status of depression and time management negatively correlates with each factor. The [8] study indicates that higher scores on time management tests lead to less concern about their responsibility, determining both quantitative and qualitative scales by GPA. Referring to our research, the inverse result means a high level of depression caused terribly time management.

**Table IV:** The difference in depression between attending Thai school and International school

	Type of school	N	Mean	Standard Deviation	T	P
Depression	Thai school	164	2.1372	0.68605	-2.19	0.019
	International school	52	2.3910	0.85551		

According to Table 4, the results show a significant difference in depression effect on Thai and international schools [ $t(216) = -2.19, p = 0.019$ ]. Depression in International schools is slightly higher than in Thai schools.

**DISCUSSION**

Nowadays, depression is a growing concern in Thailand, a mental health disorder characterized by various emotional and physical symptoms, including a loss of interest in or pleasure from activities. It is crucial to study and understand the relationship between study behavior and depression among Thai and international high school students in Bangkok.

Our results display that the status of depression and time - management significantly correlate with one another in a negative way (Table 3). The study indicates that higher scores on time management tests lead to less depression, according to the Pearson's correlation test. This result aligns with the study from College Students' Time Management: Correlations With Academic Performance and Stress, which also shows a negative correlation between time management and academic performance with stress in undergraduate students who participated for extra course credit, 51 were Masters of Business Administration (MBA) students who completed the survey as part of an in-class demonstration, and 24 were full-time teachers taking summer-school courses in the Department of Education at a large state university



In Table 2, it is shown that the mean depression and mean time management in participants were 2.20 and 3.27, respectively. Moreover, the standard deviation for depression is 0.74, while the standard deviation for time management is 0.75, which means the data is less spread out. The respondents have no significant difference due to the improper distribution of respondents. This descriptive statistic in Table 2 supports our correlation analyses in Table 3, where Thai participants with better time management (mean 3.27) were found to have lower depression (mean = 2.20).

Table 4 compares the Thai and international schools' depression effect according to the mean of both schools. The result showed that the mean of Thai and international students was 2.1372 and 2.3910, respectively. We obtained a t-test of -2.19 due to the higher mean in international students with a significant difference ( $p$ -value = 0.019). This result aligns with the study in international students in Finland from Omodona Oluwakemi and Oluwafunmilola in January 2012, which also shows that international students are potentially more depressed and stressed than local students due to loneliness, discrimination, or the language barrier.

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