Factors Affecting Depression among the First-year Undergraduate Students

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Abstract
This cross-sectional descriptive study aimed to examine predictive factors of depression among first-year undergraduate students, specifically focusing on adjustment skills and adversity quotient. The sample consisted of 595 students selected through stratified random sampling from eight schools/faculties. The research instruments comprised four sections: a demographic questionnaire, the Department of Mental Health depression screening tools (2Q and 9Q), an adjustment skills questionnaire, and an adversity quotient questionnaire. Data were analyzed using descriptive statistics, Pearson's correlation coefficient, and stepwise multiple regression analysis.

The results revealed that 48.92% of the participants had depression, which was categorized into mild (27.64%), moderate (14.91%), and severe levels (6.37%). Correlation analysis between depression, adjustment, and problem-solving and adversity-coping abilities indicated that both adjustment and problem-solving/adversity-coping abilities were significantly and negatively correlated with depression ($r = -0.669$, $p < .001$; $r = -0.197$, $p < .01$, respectively). The predictive analysis demonstrated that adjustment and problem-solving and adversity-coping abilities jointly explained 30.7% of the variance in depression among first-year undergraduate students ($F = 132.78$, $p < .001$). Both adjustment and problem-solving/adversity-coping abilities were significant predictors of depression in first-year students, with adjustment being the stronger predictor ($\beta = -0.535$, $p < .001$), followed by problem-solving and adversity-coping abilities ($\beta = -0.107$, $p < .01$).
The findings highlight that depression among first-year undergraduate students is a significant issue that warrants serious attention. University administrators and relevant faculty members should therefore provide mental health promotion services that emphasize adjustment and problem-solving and adversity-coping abilities, as well as enhance students' problem-solving skills, in order to promote and sustain positive mental health.
Key words: Factors Predicting; Depression; First-year students

BACKGROUND AND SIGNIFICANCE

Adolescence can be divided into three developmental stages: early adolescence, middle adolescence, and late adolescence [1]. This period is characterized by significant changes across multiple developmental domains and is considered a vulnerable stage, as it represents a critical transitional phase from childhood to adulthood. Adolescents may experience confusion and uncertainty regarding their roles and identities [2]. Marked physical changes related to sexual hormones occur during this stage. Cognitive development advances toward abstract and logical thinking, accompanied by increased maturity, independent thinking, and the search for personal identity. Adolescents seek autonomy, exhibit curiosity, and are inclined to explore new and novel experiences. Due to rapid emotional fluctuations, adolescence has often been referred to as a period of "storm and stress." Emotional expressions may at times be intense and overwhelming, with emotional instability, egocentric tendencies, and predominantly concrete thinking, along with limited ability to regulate emotions effectively [2]. Adolescents may exhibit behavioral responses that reflect inappropriate emotional regulation. They have a strong need for love and acceptance from peers and society, and their relationships with the opposite sex increasingly develop during this period [2]. Adolescence involves simultaneous changes across multiple domains, requiring substantial adjustment; therefore, it is a stage in which problems are likely to occur. Successful adjustment enables adolescents to develop positive personalities, which serve as an essential foundation for their future lives [1,2,3]. Adolescent development typically begins around the ages of 12–13 years. Females generally enter adolescence approximately two years earlier than males, and development continues until around 18 years of age, when individuals transition into adulthood. During this period, significant changes occur in various developmental domains, including physical development, psychological development, intellectual development, and social development. Depression is a commonly observed phenomenon and represents a major mental health problem during adolescence. While depression is relatively uncommon in childhood, its prevalence increases during middle to late adolescence and extends into early adulthood [4]. This may be attributed to adolescents' emotional sensitivity, desire for independence and adulthood, resistance to external reasoning, egocentrism, pride, and self-importance, combined with limited problem-solving skills and communication abilities, which make them more vulnerable to difficulties.

Depression refers to a cluster of emotional and psychological symptoms, including depressed mood, loss of interest or pleasure, feelings of sadness, poor concentration, low self-esteem, hopelessness about the future, and thoughts of death or suicide. Other symptoms may include sleep disturbances, changes in appetite or body weight, and excessive fatigue or loss of energy [5]. The causes of depression include: (1) abnormalities in neurotransmitter function; (2) genetic factors, as individuals with a family history of depression have a 2.8 times higher risk of developing the disorder compared to the general population; (3) personality characteristics, such as pessimism and emotional suppression; and (4) various physical illnesses and the use of certain medications, including endocrine disorders, cancer, malnutrition, and infectious diseases [6,7]. The severity of depression can be classified into different levels according to the intensity of symptoms and their impact on daily functioning. The World Health Organization (WHO) [5] projected that by 2020, depression would rank as the second leading cause of disability-adjusted life years (DALYs), following ischemic heart disease, among individuals aged 15–44 years. In Thailand, the prevalence of depression has shown an increasing trend. According to the summary report of the provincial depression surveillance and care system in 2017 (data as of January 25, 2017), a total of 14,628,479 individuals were

screened for depressive symptoms using the two-question screening tool (2Q). Of these, 7,280,668 individuals screened positive for depression (2Q+ve) and subsequently received mental health education [8]. Furthermore, a review of the literature revealed a high prevalence of depressive symptoms among university students. Specifically, students at Mahasarakham Rajabhat University were found to have depressive symptoms at a rate of 36.4% (Ekalak Sruamsiri, 2021).

These findings are consistent with a study on depression among first- to third-year medical students at the College of Medicine and Public Health, Ubon Ratchathani University, conducted by Patcharee Phanpanich and colleagues [9]. The study found that preclinical medical students had a high prevalence of depression, at 32.87%. Factors associated with depression included examination-related problems, parental expectations to pursue medical studies, feelings of boredom and lack of enjoyment in teaching and learning activities, and students' preparedness for learning and instruction. In addition, a study by Kamonnat Khlongdee and Surachai Chaniang [10], which examined predictors of depression among nursing students at Boromarajonani College of Nursing Nakhon Phanom, Nakhon Phanom University, found that stress, resilience, age, and social support were significant predictors, collectively explaining 63% of the variance in depression among nursing students. Stress was positively associated with depression, whereas age, resilience, and social support were negatively associated with depression. In addition, Krawika Buatchum and colleagues [11] examined predictors of mental health among nursing students at Prince of Songkla University. The findings indicated that the predictive factors accounted for 25.90% of the variance in mental health. The variable that significantly predicted the mental health status of nursing students was attitude toward the nursing profession. Furthermore, a study by Kannikar Kanchanasuwan [12], which investigated depression among students in a health sciences program in Thailand, found that factors associated with depression included relationship problems with a partner, sleep problems, and family-related issues. These findings indicate that a substantial proportion of students across various institutions experience depressive symptoms, highlighting depression among students as an important public health problem that requires appropriate intervention.

Research Objectives

1. To assess the level of depression among first-year undergraduate students.
2. To examine the predictive factors associated with depression among first-year undergraduate students.

Definition of Terms

1. Depression

Depression refers to a mental health condition characterized by disturbances in mood and affect, including persistent sadness, anhedonia, feelings of boredom, emotional distress, discouragement, hopelessness, psychomotor retardation, sleep disturbances, appetite changes, impaired concentration, anxiety, and negative cognitive patterns.

2. First-year undergraduate students

First-year undergraduate students refer to individuals enrolled in the first year of a bachelor's degree program at Suranaree University of Technology during the academic year 2018.

3. Predictive factors

Predictive factors refer to variables that have the ability to predict or influence the occurrence of depression in first-year undergraduate students.

4. Adjustment

Adjustment refers to the process by which individuals modify and regulate their physical, emotional, and behavioral responses in order to adapt to environmental demands and situational stressors, maintain psychological well-being, and achieve personal goals.

5. Coping and resilience ability

Coping and resilience ability refers to an individual's capacity to effectively manage, confront, and overcome stressors or adversities through appropriate cognitive appraisal and adaptive problem-solving strategies

CONCEPTUAL FRAMEWORK

The conceptual framework of this study was developed from an integration of Roy's Adaptation Model (Roy, 1999) and the concept of coping and resilience ability proposed by Stoltz (1997). Roy's Adaptation Model is based on the belief that human beings consist of biological, psychological, and social components that function together as a unified system to maintain normal functioning or health. Illness or other internal and external stimuli resulting from life changes may affect individuals physically, psychologically, and socially. Therefore, individuals must adapt in order to maintain biological, psychological, and social balance. Successful adaptation leads to life stability, good health, acceptance of reality, and life satisfaction, whereas failure to adapt results in health problems, poor acceptance of reality, and the development of depression.

Based on a review of relevant concepts and theories, it is believed that adjustment affects the maintenance of biological, psychological, and social balance. Individuals with effective adjustment are more likely to demonstrate acceptance and are less likely to develop depression, whereas failure to adjust may lead to poor acceptance and the development of depressive symptoms. In addition, individuals with better coping and resilience ability tend to experience lower levels of depression than those with poor coping ability. The research team believes that both adjustment and coping/resilience ability influence depression among first-year undergraduate students, who experience multiple transitions and changes. This assumption is consistent with Roy's Adaptation Model. Therefore, the researchers are interested in examining these two factors in order to apply the findings to nursing care and the prevention of depression among first-year undergraduate students at Suranaree University of Technology.

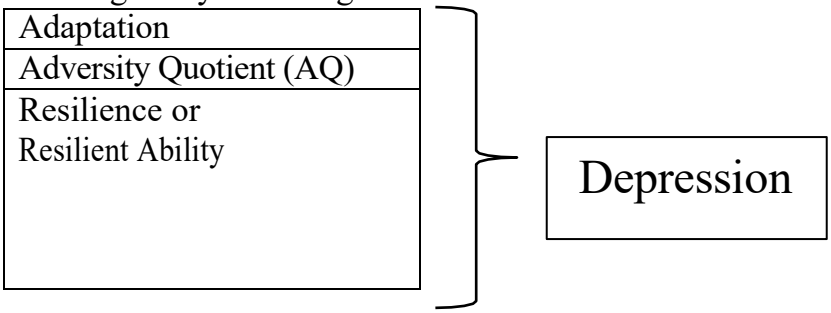

Figure 1. Conceptual framework of the study illustrating factors influencing depression, including adjustment and coping and resilience ability.

METHODS

This study employed a cross-sectional descriptive research design to examine the prevalence and predictive factors of depression among first-year undergraduate students at Suranaree University of Technology.

Population and Sample

The population consisted of first-year undergraduate students at Suranaree University of Technology during the academic year 2019, totaling 3,549 students.

Sample

The sample was selected using purposive sampling with proportional quota allocation across all eight institutes, totaling 600 participants. The number of participants was proportionally allocated according to the number of students in each academic program based on the population of each institute was included in the sample, as follows:

Institute of Science consisted of 129 students, with 43 participants
Institute of Social Technology consisted of 381 students, with 177 participants
Institute of Agricultural Technology consisted of 286 students, with 23 participants
Institute of Engineering consisted of 2,310 students, with 225 participants
Institute of Medicine consisted of 92 students, with 9 participants
Institute of Nursing consisted of 121 students, with 82 participants
Institute of Dentistry consisted of 39 students, with 11 participants
Institute of Public Health consisted of 191 students, with 30 participants

Research Instruments and Data Collection

The inclusion criteria were students who screened positive for depression by responding "yes" to at least one item on the 2Q depression screening questionnaire. The exclusion criteria were students who completed the 2Q questionnaire and did not indicate depressive symptoms. Data collection was conducted as follows.

Data were collected using four sets of questionnaires, as follows:

1. General Information Questionnaire

This questionnaire included items on sex, age, institute, monthly income, accommodation during study, family status, father's educational level, mother's educational level, father's occupation, mother's occupation, and primary family income.

2. Depression Assessment Questionnaires

The depression assessment instruments developed by the Department of Mental Health, including the 2Q and 9Q questionnaires, were used to assess depressive symptoms

3. Adjustment Questionnaire

The adjustment questionnaire consisted of 40 items and was adapted from the instrument developed by Nantip Harsin (2016), based on Roy's Adaptation Model (Roy, 1999). The questionnaire comprised four domains: physiological, self-concept, role function, and interdependence. The items included both positively and negatively worded statements, with responses in a dichotomous format (Yes/No).

Scoring of the Adjustment Questionnaire

Positively worded items included items 1, 3, 4, 10, 12, 14, 16, 17, 18, 19, 21, 24, 25, 26, 29, 30, 31, 32, 33, 34, 35, 39, and 40. Scoring was assigned as follows: "No" = 0 points and "Yes" = 1 point.

Negatively worded items included items 2, 5, 6, 7, 8, 9, 11, 13, 15, 20, 22, 23, 27, 28, 36, 37, and 38. Scoring was assigned as follows: "Yes" = 0 points and "No" = 1 point.

Criteria for Score Interpretation

The total score was calculated from all four domains. Adjustment was categorized into two levels: good adjustment and poor adjustment, based on the following criteria:

- 0–20 points indicated poor adjustment.
- 21 points or higher indicated good adjustment.

Coping and Resilience Ability Scale

The Coping and Resilience Ability Scale, developed by Siriwan Wongphongkasem (2011), consisted of 39 items. The scale assessed the extent to which students would think or behave when encountering specific situations. The instrument included both positively and negatively worded items. Responses were measured using a 5-point interval scale, ranging from "lowest" to "highest."

Scoring Criteria

Positively worded items included items 1, 2, 3, 4, 5, 6, 7, 14, 15, 23, 25, 26, 31, 32, 33, 34, 35, and 36. Scoring was assigned as follows:

- Highest = 5 points
- High = 4 points
- Moderate = 3 points
- Low = 2 points
- Lowest = 1 point

Negatively worded items included items 11, 12, 13, 16, 17, 21, 22, 24, 27, and 37. Scoring was assigned as follows:

- Highest = 1 point
- High = 2 points
- Moderate = 3 points
- Low = 4 points
- Lowest = 5 points

The total score ranged from 28 to 140 points. Interpretation of the total scores was categorized as follows:

157–195 points indicated very high coping and resilience ability.
118–156 points indicated high coping and resilience ability.
79–117 points indicated moderate coping and resilience ability. 40–
78 points indicated low coping and resilience ability.
1–39 points indicated very low coping and resilience ability.

Data Collection

The last two questionnaires were tested for reliability by collecting data from a group of 30 participants with characteristics similar to those of the actual sample. Instrument reliability was examined using Cronbach's alpha coefficient, yielding reliability coefficients of 0.86 and 0.78, respectively. Official permission letters were sent to the deans of each institute to request cooperation in data collection. The researchers then distributed the questionnaires to the participants, collected the completed questionnaires, checked the data for completeness, and proceeded with data analysis.

Data Analysis

Data were analyzed according to the conceptual framework using regression analysis. The adjustment variable, which was measured on a nominal scale, was transformed into dummy variables prior to analysis. The coping and resilience ability variable was measured using a rating scale. Differences among institutes were analyzed using analysis of variance (ANOVA), followed by in-depth interpretation of the findings. The results of the analysis were subsequently reported to the institutes to facilitate appropriate student support and assistance.

RESULTS

This study aimed to assess depression among first-year undergraduate students and to examine predictive factors associated with depression among first-year undergraduate students. The results of data analysis are presented as follows:

1. Results of personal characteristics analysis
2. Results of depression assessment among first-year undergraduate students
3. Results of predictive factors associated with depression among first-year undergraduate students

1) Results of Personal Characteristics Analysis

The sample in this study consisted of 595 participants. The personal characteristics of the respondents are presented in the following table1.

Table 1. Number and percentage of personal characteristics of the respondents (n = 595)

Personal Characteristics	Number (n)	Percentage (%)
1. Institute		
Institute of Engineering	225	37.9
Institute of Social Technology	177	29.8
Institute of Nursing	82	13.8
Institute of Science	43	7.2
Institute of Public Health	30	5.1
Institute of Agricultural Technology	23	3.9
Institute of Dentistry	11	1.9
Institute of Medicine	4	0.7
2. Sex		
Male	172	28.9
Female	423	71.1
3. Family status		
Parents living together	402	67.6
Father or mother deceased	48	8.1
Parents divorced/separated	142	23.9
Both parents deceased	1	0.2
Not specified	2	0.3
4. Source of income		
Father	320	53.8
Mother	242	40.7
Others	32	5.4
Not specified	1	0.2
5. Adequacy of students' income		
Adequate	139	23.5
Inadequate	452	76.5
6. Adequacy of family income		
Adequate	213	36.0
Inadequate	379	64.0
7. Level of depression		
Very mild	303	51.08

Personal Characteristics	Number (n)	Percentage (%)
Mild	165	27.64
Moderate	89	14.91
Severe	38	6.37

According to Table 1, the majority of participants were students from the Institute of Engineering (n = 225, 37.9%), followed by those from the Institute of Social Technology (n = 177, 29.8%). The smallest proportion of participants was from the Institute of Medicine (n = 4, 0.7%). When classified by sex, most participants were female (n = 423, 71.1%), while male students accounted for 172 participants (28.9%). Regarding family status, the majority of participants reported that their parents were living together (n = 402, 67.6%), followed by those whose parents were divorced or separated (n = 142, 23.9%).

In terms of depression levels, most participants had very mild depression (n = 303, 51.08%), followed by mild depression (n = 165, 27.64%), moderate depression (n = 89, 14.91%), and severe depression (n = 38, 6.37%).

2) Results of Depression Assessment among First-Year Undergraduate Students

Table 2. Number and percentage of levels of depression classified by institute

Institute	Depression	Number (n)	Percentage (%)
Institute of Science	Very mild	3	6.98
	Mild	20	46.51
	Moderate	14	32.56
	Severe	6	13.95
Total		43	100
Institute of Social Technology	Very mild	91	51.41
	Mild	50	28.25
	Moderate	23	12.99
	Severe	13	7.34
Total		177	100.00
Institute of Agricultural Technology	Very mild	18	78.26
	Mild	2	8.70
	Moderate	2	8.70
	Severe	1	4.35
Total		23	100.00
Institute of Engineering	Very mild	118	52.44
	Mild	55	24.44
	Moderate	38	16.89
	Severe	14	6.22
Total		225	100.00

Institute	Depression	Number (n)	Percentage (%)
Institute of Medicine	Very mild	0	0.00
	Mild	3	75.00
	Moderate	1	25.00
	Severe	0	0.00
Total		4	100.00
Institute of Nursing	Very mild	60	73.17
	Mild	19	23.17
	Moderate	3	3.66
	Severe	0	0.00
Total		82	100.00
Institute of Dentistry	Very mild	8	72.73
	Mild	3	27.27
	Moderate	0	0.00
	Severe	0	0.00
Total		11	100.00
Institute of Public Health	Very mild	27	90.00
	Mild	2	6.67
	Moderate	1	3.33
	Severe	0	0.00
Total		30	100.00
All institutes	Very mild	303	51.08
	Mild	165	27.64
	Moderate	89	14.91
	Severe	38	6.37
Total	**-**	**595**	**100.00**

According to Table 2, the levels of depression classified by institute were as follows. Students from the Institute of Science mostly reported mild depression (6.98%), followed by low depression (46.51%), moderate depression (32.56%), and severe depression (13.95%).

In the Institute of Social Technology, the majority of students had very low levels of depression (51.41%), followed by low (28.25%), moderate (12.99%), and severe depression (7.34%).

Students from the Institute of Agricultural Technology predominantly reported very low depression (78.26%), followed by low (8.70%), moderate (8.70%), and severe depression (4.35%).

For the Institute of Engineering, most students experienced very low depression (52.44%), followed by low (24.44%), moderate (16.89%), and severe depression (6.22%).

In the Institute of Medicine, most students reported low depression (75.00%), while the remaining students experienced moderate depression (25.00%).
Students from the Institute of Nursing mostly had very low levels of depression (73.17%), followed by low (23.17%) and moderate depression (3.66%).
In the Institute of Dentistry, the majority of students reported very low depression (72.73%), followed by low depression (27.27%).
Lastly, students from the Institute of Public Health predominantly experienced very low depression (90.00%), followed by low (6.67%) and moderate depression (3.33%).

3) Factors Predicting Depression among First-Year Undergraduate Students

Relationships among Selected Variables Correlation analysis indicated that adaptation and adversity quotient were negatively associated with depression ($r = -.669$, $p < .001$; $r = -.197$, $p < .01$, respectively). In addition, the predictor variables were moderately correlated with one another, as shown in Table 3.

Table 3 Means, Standard Deviations, and Correlations Among Study Variables.

Variables	Mean (SD)	Y	X1	X2
Depression (Y)	8.45(5.511)	1		
Adaptation (X1)	26.26(5.853)	-.669**	1	
Adaptation Quotient (X2)	115.15(6.737)	-.197**	-.248**	1

*p<.05, **p<.01, and ***p<.001

Predictors of Depression among First-Year Undergraduate Students. Stepwise multiple regression analysis revealed that adaptation and adversity quotient jointly explained 30.7% of the variance in depression among first-year undergraduate students ($F = 132.78$, $p < .001$). Both variables were found to be statistically significant predictors of depression. Specifically, adaptation ($\beta = -.535$, $p < .001$) and adversity quotient ($\beta = -.107$, $p < .01$) were negatively associated with depression, as presented in Table 4.

Table 4 Predictors of Depression

Variables	*b*	*SE*	*β*	*t*	*p-value*
Constant	15.342	.469	-	32.731	<0.001
Adaptation (X1)	-7.676	.492	-.535	-15.596	<0.001
Adaptation Quotient (X2)	-1.176	.378	-.107	-3.110	<.01

$R^2 = .310$, Adjust $R^2 = .307$, $R = .556$, $F = 132.785$, $p < .001$

Based on the regression analysis, the predictive equations for depression among first-year undergraduate students were as follows:
Unstandardized score equation:
Depression = 15.342 − 7.676 (Adaptation) − 1.176 (Adversity Quotient)
Standardized score equation:
Z Depression = −.535 (Adaptation) − .107 (Adversity Quotient)

DISCUSSION

This section discusses the research findings according to the study objectives.

1) Depression among First-Year Undergraduate Students The results of this study revealed that 49.91% of the participants experienced depression, which was classified as mild (27.64%), moderate (14.91%), and severe (6.37%). The occurrence of depression among first-year undergraduate students may be largely attributed to difficulties in adaptation during the transition to university life, particularly during the COVID-19 pandemic. During the study period, preventive measures against COVID-19, including social distancing, restrictions on group activities, and the implementation of online learning, significantly reduced opportunities for social interaction with peers. These circumstances may have negatively affected students' psychological well-being and contributed to depressive symptoms. These findings are consistent with reports from the Department of Mental Health, Thailand, which indicated that the COVID-19 crisis led to persistent stress, anxiety, and depression among adolescents. Data collected from 183,974 children and adolescents under 20 years of age who completed mental health self-assessments via the Mental Health Check-in application between January 1, 2020, and September 30, 2021, showed that 28% experienced high stress, 32% were at risk of depression, and 22% were at risk of suicide [8]. Furthermore, the prevalence of depression observed in this study is comparable to the findings of Duangjai Watanasin et al. [15] (2015), who reported a prevalence of 49% among undergraduate students in health science programs at Burapha University. However, the prevalence found in this study is higher than that reported in several previous studies, which documented depression rates ranging from 4.3% to 17% among university students [16,17]. This discrepancy may be due to differences in study populations, as many prior studies focused on students from a single faculty or discipline, whereas the present study included first-year undergraduate students from all schools within the university. In addition, previous studies, such as that by Areerat Siripongphan et al. [17] (2018), were conducted under normal circumstances, unlike the present study, which took place during the COVID-19 pandemic. The unique context of the pandemic likely contributed to the higher prevalence of depression observed in this study.

2). Predictors of Depression among First-Year Undergraduate Students. The findings of this study indicated that adaptation and adversity quotient jointly explained 30.7% of the variance in depression among first-year undergraduate students ($F = 132.78$, $p < .001$). Both variables were identified as statistically significant predictors of depression. Specifically, adaptation ($\beta = -.535$, $p < .001$) and adversity quotient ($\beta = -.107$, $p < .01$) were negatively associated with depression among first-year undergraduate students. These findings demonstrate that students with better adaptive abilities and greater capacity to cope with and overcome adversity were less likely to experience depressive symptoms. The relationships and effects of each predictor variable are discussed in detail below.

2.1 Adaptation

The findings demonstrated that depression was significantly negatively correlated with adaptation among first-year undergraduate students ($r = -.669$, $p < .001$), indicating that students with higher levels of depression tended to exhibit poorer adaptation. This may be explained by the severity of depressive symptoms, which can impair emotional regulation and cognitive processes essential for effective problem-solving and adaptive functioning. According to Roy's Adaptation Model [13], individuals are holistic adaptive systems that respond to environmental stimuli through coping processes, resulting in adaptive or maladaptive behaviors across four modes: physiological, self-concept, role function, and interdependence. Depression may therefore be considered a focal stimulus that disrupts adaptive responses within these modes. Consistent with previous studies conducted among adults and older persons using Roy's theoretical framework [18–20], individuals with

depression tend to demonstrate ineffective adaptation. Students with lower levels of depression are more likely to cope effectively with stressors and maintain physical, psychological, and social balance, whereas poor adaptation may contribute to the development of depressive symptoms [21].

2.2 Adversity Quotient: AQ

The results revealed that depression was significantly negatively correlated with Adversity Quotient among first-year undergraduate students ($r = -.197$, $p < .01$), indicating that students with higher levels of depression tended to have lower abilities to cope with and overcome difficulties. Individuals with high AQ are generally mentally resilient, persistent, and able to confront challenges despite failure or obstacles. Adversity Quotient is considered an important factor contributing to life success. According to social problem-solving theory, ineffective problem-solving skills may increase vulnerability to depression [15]. This finding is consistent with the study by Areerat Siripongphan et al. [17] (2018), which reported that depression among first-year students at Suranaree University of Technology was associated with difficulties in managing multiple stressors, including family relationships, peer relationships, academic demands, physical health, university adjustment, and romantic relationships. These findings suggest that students who are unable to effectively manage and cope with personal and social problems are more likely to develop depressive symptoms.

CONCLUSION

Most respondents were female (71.1%) and were students from the School of Engineering (59.5%). The majority reported that their parents were living together (67.6%). Students' primary source of income was from their fathers (53.8%). Most students indicated that their personal income was insufficient (76.5), and family income was also reported as insufficient (64.0%).

The assessment of depressive symptoms revealed that 49.91% of the participants experienced depression. This included mild depression (27.64%), moderate depression (14.91%), and severe depression (6.37%). When comparing the proportion of students with depression by school, students from the School of Medicine had the highest prevalence (100%), followed by the School of Engineering, Dentistry, and Nursing, with prevalence rates of 47.56%, 27.27%, and 26.83%, respectively.

Analysis of the relationships between depression, adjustment, and problem-solving and adversity-coping abilities showed that both adjustment and problem-solving and adversity-coping abilities were significantly negatively correlated with depression ($R = -.669$ and $-.197$; $p < .001$ and $p < .01$, respectively). Multiple regression analysis indicated that adjustment and problem-solving and adversity-coping abilities together explained 30.7% of the variance in depression among first-year students ($F = 132.78$, $p < .001$). Furthermore, adjustment and problem-solving and adversity-coping abilities were significant predictors of depression among first-year students, with statistical significance ($\beta = -.535$, $\beta = -.107$; $p < .001$ and $p < .01$, respectively).

Recommendations

Stakeholders involved in student mental health care within educational institutions should implement systematic assessment and screening of students' adjustment and adversity quotient, as these factors are significantly associated with depressive symptoms among undergraduate students. Early identification of students with poor adjustment or limited

coping abilities may facilitate timely prevention and intervention for depression. In addition, universities should develop and implement activities or structured programs aimed at enhancing students' adjustment skills and strengthening their ability to cope with and overcome adversity, thereby supporting effective adaptation to university life and reducing the risk of depression.

Further research is recommended to examine depressive symptoms across different academic years in order to determine whether the prevalence of depression increases with academic progression. Future studies should also explore differences in adjustment, coping abilities, and strategies for managing depressive symptoms among students at different academic levels. Moreover, additional factors associated with depression and other mental health problems among university students should be investigated, including teaching and learning modalities, academic environments, and institutional activities that may influence students' mental health outcomes.

Footnotes

Authors' Contribution: Conceptualization: K. S., and L. T.; Methodology: K. S. and L.T.; Software: K. S., W. N., P. K., and L. T.; Validation: K. S., W. N., P. K., Formal analysis: W. N., P. K., and L. T.; original draft preparation: K. S., W. N., P. K., and L. T.; Writing — review and editing: K. S., W. N., and L.T.; All authors have read and agreed to the published version of the manuscript.

Conflict of Interests Statement: This research study received the research grant support from Suranaree University of Technology

Data Availability: The dataset presented in the study is available on request from the corresponding author during submission or after publication.

Ethical Approval: This study was approved by the Human Research Ethics Committee of Suranaree University of Technology (COA NO 75/2562), dated October 7, 2019, until October 6, 2020. This study was also conducted in accordance with the Declaration of Helsinki.

Informed Consent: All study participants gave their informed consent prior to data collection.

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