Research Article

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Development and Psychometric Evaluation of a Psychological Capital Assessment Tool for University Students: A Pilot Study

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Abstract

Background: Environmental changes experienced by university students are contributing factors to their mental health problems. Therefore, enhancing students' psychological capital can play a key role in preventing depression and promoting mental well-being. **Objective**: This study was aimed at developing a psychological capital assessment tool for university students and investigating the relationship between psychological capital, depression, and mental health status. **Methods**: This study was a pilot study with a cross-sectional design. A multi-stage random sampling method was employed to recruit of 409 participants from public and private universities in the central, eastern, and southern regions of Thailand. Data were collected using four instruments via paper from December 15, 2024, to February 28, 2025: (1) a demographic questionnaire, (2) the Psychological Capital Assessment for University Students, (3) a depression scale, and (4) a mental health status scale. Descriptive statistics and multiple regression analysis were used for data analysis. **Results**: The 50-item-developed assessment tool consisted of five components: (1) problem-solving ability, (2) organized thinking ability, (3) self-regulation ability, (4) self-efficacy ability, and (5) relationship ability. The tool demonstrated acceptable psychometric properties, with a content validity index of 0.84 and a Cronbach's alpha coefficient of 0.90. Psychological capital was significantly negatively correlated with depression and mental health problems. Moreover, it accounted for 28% of the variance in depression and 25% of the variance in mental health status. **Conclusion**: The Psychological Capital Assessment for University Students

has been proven to have acceptable content validity and internal consistency. It, therefore, can be used as a screening tool to identify students at risk of depression and mental health problems.

Keywords: Psychological capital, Scale development, Psychometric evaluation, University students, Mental health

What was Known

- First-year university students are highly vulnerable to mental health problems.
- Strengthening psychological capital offers sustainable prevention beyond treatment.
- No validated tool for Thai students focusing on psychological strengths over illness.

What's New and Next

- Developed a validated tool to assess psychological capital in Thai university students.
- Psychological capital predicts depression and mental health problems among students.
- Future work should apply these variables to design targeted development programs.

Introduction

Social crises characterized by increasing violence and complexity have had widespread impacts on public health systems, the economy, society, the environment, and national security. Various violent events affect the mental health of individuals across all population groups, both directly and indirectly. Children and adolescents are particularly vulnerable, as they are often required to cope with multiple crises. Recent evidence indicates that mental health concerns among children and adolescents have been rising. According to data from the Mental Health Check-In system of the Thai Department of Mental Health, children and adolescents under the age of 18 underwent mental health screening. Among them, 24.83% of Thai youths experience high stress levels, with 20.35% at risk of suicide[1,2]. When examining the issue of depression and mental health status among university students, it is found that 17–40% of university students in Thailand show symptoms of depression. Contributing factors include gender, age, and field of study[3]. University education requires students to adapt to a new lifestyle that demands greater self-reliance and responsibility in managing daily life and academic tasks[4]. Unlike secondary education, university learning involves different teaching methods, environments, social contexts, and lifestyles. Students must rely on their own knowledge and skills for learning while adjusting to a new social setting, new friends, religious and cultural diversity, varying socioeconomic statuses, academic abilities, interests, and increased independence[5]. Findings from a university-level

health behavior assessment conducted between June and September 2022, involving 9,050 students from 15 partner universities across five regions of Thailand, revealed that approximately 40% of students experienced severe stress, while 4.3% had been clinically diagnosed with psychiatric disorders. These results highlight the growing mental health burden among university students, who represent a critical segment of the national workforce and are transitioning into early adulthood and family life[1]. Therefore, a supportive physical environment, social support from peers, academic support, and counseling services from staff or faculty members can play a significant role in helping students cope with arising challenges[6]. Conversely, failure to adapt to these changes and diversities may result in mental health issues such as stress, anxiety, depression, substance abuse, suicidal thoughts, and suicide attempts[7,8,9]. The key approaches are the establishment of structured student support and assistance systems within universities, including platforms for knowledge exchange and collaborative learning in student mental health care. Additionally, to implement a "hospital partner network system" to strengthen university mental health services through personnel capacity building, referral mechanisms, continuity of care, and ensuring equitable and accessible mental health support for university students nationwide. These initiatives aim to enhance students' quality of life through mental health promotion, prevention strategies, balanced well-being, and preparedness for successful integration into society[1]. Thus, fostering psychological resilience among university students is a crucial approach to promoting and preventing mental well-being and enabling them to enjoy a fulfilling university life.

Under the concept of positive psychology, it is suggested that psychological capital is associated with the prevention of depression and mental health problems. Individuals who recognize their own values and are aware of their inner potential, possess positive thoughts and emotions, show determination and self-regulation, and are capable of problem-solving based on psychological capital[10]. Particularly, the development of psychological capital through components based on the PERMA model has been shown to be associated with improved quality of life and positive mental health, while also reducing the risk of negative emotions and depressive symptoms among adolescents[11][12]. Therefore, to effectively prevent mental health problems, particularly depression, it is essential to have reliable tools for assessing the psychological capital of university students. Such tools can be used for early screening and prevention, helping to reduce the severity of potential mental health challenges.

The development of this psychological capital assessment tool for university students is based on Seligman's PERMA model [13], which focuses on measuring characteristics grounded in positive psychology. These characteristics reflect essential mental strengths and competencies for 21st-century learners, including: (1) Problem-Solving Ability – This reflects individuals' cognitive, emotional, and behavioral processes in managing, controlling, adapting to, or alleviating stress caused by various challenges. It involves problem definition, selection of coping strategies, social skills for problem-solving, and the courage to face difficulties. It also includes fostering positive thinking, hope, determination, and the perseverance needed to overcome life's obstacles. (2) Organized Thinking Ability – This reflects various modes of thinking that demonstrate cognitive growth, such as creative thinking, critical thinking, logical reasoning, analytical and synthetic thinking. All of these are grounded in appropriate principles and aligned with social and cultural contexts. (3) Self-Regulation Ability – This reflects a person's sense of responsibility for their independent actions without causing negative impacts on themselves or others. It also involves the ability to regulate behavior to achieve personal or socially defined goals or standards. (4) Self-efficacy Ability – This reflects an individual's awareness and confidence in their own abilities to handle different situations. It includes a realistic understanding of their strengths and limitations, as well as the ability to forgive themselves in case of failure or mistakes. (5) Relationship Ability – This reflects interpersonal communication skills, teamwork, and relationship-building abilities that indicate one's adaptability and self-regulation. These characteristics are recognized as **"**new competencies**"** essential for thriving in today's rapidly changing society. Possessing these psychological competencies enables individuals to handle everyday life challenges effectively and to adapt to future changes. Ultimately, this supports their ability to live happily in society while minimizing the risk of mental health issues or maladjustment[14].

Although measuring psychological capital traits is critically important for assessing individuals and preventing mental health problems—especially depression—there is currently no assessment tool that comprehensively captures these characteristics. Existing tools are often adapted from Western-based concepts, such as the Psychological Capital Inventory (PCI), which has been translated into Thai[15], or focus on evaluating only specific aspects of psychological traits. For instance, the VIA Character Strengths Survey (VIA-IS) assesses an individual's personality strengths[16], while other tools measure self-esteem, coping strategies, or emotional intelligence[17]. Moreover, most existing tools are not specifically designed for university students. In light of these limitations, the present study aims to develop a psychological capital assessment

tool tailored for university students. This study begins with a pilot phase focusing on the development and examination of the tool's psychometric properties, starting with content validity, in order to refine and align the items with the theoretical framework. This is followed by testing for internal consistency reliability, and finally, evaluating the effectiveness of the assessment in terms of its relationship to mental health outcomes and its predictive power regarding depression and mental health deviations. The outcome of this research will be a reliable and targeted assessment tool specifically designed to measure the psychological capital of university students, which may be used for early screening of mental health risks and for supporting the design of preventive and strength-based mental health promotion activities within universities in ways that align with the cultural context of Thai students.

This study aimed to achieve the following objectives: (1) To develop a psychological capital assessment tool for university students with validated psychometric properties. (2) To examine the relationship between psychological capital and depression, as well as mental health status among university students. (3) To investigate the influence of each component of psychological capital in predicting depression and mental health conditions among university students.

Materials and Methods

1. Research Design

This pilot study aimed at developing and evaluating the psychometric properties of a psychological capital assessment tool. It employed a descriptive cross-sectional design to assess the effectiveness of the tool in measuring the relationship and influence of psychological capital on depression and mental health status among university students. The research was conducted in two phases: (1) Instrument Development Phase – focusing on the construction of the assessment tool and evaluation of its psychometric properties. (2) Assessment Phase – examining the relationship between the psychological capital assessment tool and levels of depression and mental health, including its predictive influence on depression and mental health deviations.

2. Population and Sample

The population of this study comprised undergraduate students, enrolling in the public and private universities in Thailand during the academic year 2024. The sample size was calculated using G*Power version 3.1.9.2[18], with a medium effect size of 0.25, an alpha level of 0.05, and a statistical power level of 0.90. The calculated minimum sample size was 338 participants. However, to account for incomplete responses, careless answering, or unusable data, the researcher increased the sample size by 20%, resulting in a final sample size of 410 participants.

A multi-stage random sampling method was employed to ensure a representative and geographically diverse sample of university students. The sampling procedure consisted of the following steps: Step 1: The researcher randomly selected three out of six regions in which the higher education institutions located, including Central, Eastern, and Southern regions. Step 2: One public university under the supervision of the Ministry of Higher Education, Science, Research, and Innovation (MHESI) was randomly selected from each region: Mahidol University (Central), Burapha University (Eastern), and Walailak University (Southern). Additionally, one private autonomous university in the Central region was selected: University of the Thai Chamber of Commerce. In total, four universities were included in the study. Step 3: From each institution, one academic program was randomly selected. The sample was proportionally allocated, with approximately 102–103 students per university.

Inclusion criteria were: (1) Currently enrolled in a regular undergraduate program, (2) Able to read, write, and communicate in Thai, and (3) Willing to participate voluntarily in the study. Exclusion criteria included: Incomplete responses (more than 30% of items left unanswered), or Responses showing clear signs of guessing or carelessness, such as selecting the same option repeatedly without variation.

3. Research Instruments

The instruments used for data collection in this study consisted of four parts: (1) Personal Information, (2) Psychological Capital Assessment, developed by the research team, (3) Depression Assessment using the Beck Depression Inventory (BDI), and (4) Mental Health Assessment using the General Health Questionnaire (GHQ-28). The details of each instrument are as follows:

Part 1: Personal Characteristics: This section consists of both closed-ended and open-ended questions developed by the researcher based on a literature review. It is designed to collect basic information about the participants that may be related to mental health status. The questionnaire includes 11 items covering the following aspects: gender, age, faculty of study, high school GPA, income, expenses, parents' marital status, living arrangement, type of residence, hometown, and religion.

Part 2: Psychological Capital Assessment Scale (PCAS) for University Students: This assessment scale was developed by the researchers based on a literature review related to psychological capital that is associated with the prevention of mental health problems, according

to the concept of Psychological Flexibility. It integrates 21st-century learning skills for youth based on Seligman's PERMA model framework. [13] The measurement consists of five components, each containing 10 items, for a total of 50 items: (1) Problem-Solving Ability — For example, "I believe that problems that arise can be managed and solved in one way or another," and "I try to understand the problems that occur in order to find solutions." (2) Organized Thinking Ability — For example, "I am someone who quickly analyzes and identifies key points when problems arise," and "I can identify the factors related to the problem." (3) Self-Regulation Ability — For example, "I am aware of my emotions and can appropriately control my expressions," and "I consider the consequences before deciding to do something." (4) Self-Efficacy Ability — For example, "I believe that I have the ability to make myself proud," and "I believe that I am capable of achieving my goals." And (5) Relationship Ability — For example, "I pay attention to the feelings of people around me," and "I can happily coexist with people who have diverse differences in many aspects." The scale uses a 4-point rating system: 1 = Strongly disagree, 2 = Disagree, 3 = Agree and 4 = Strongly agree. Scores are summed for each component, with possible total scores ranging from 50 to 200. Higher scores indicate greater psychological capital compared to those with lower scores. This assessment has demonstrated good psychometric properties, with Content Validity Index (CVI) for each component ranging from 0.74 to 1.00, an Item-Objective Congruence (IOC) score of 0.84, and a Cronbach's Alpha reliability coefficient of 0.90.

Part 3: The Beck Depression Inventory I (BDI-IA) is an assessment tool originally developed in English and later translated into Thai through a back translation process by Mukda Sriyong[19]. This tool is designed to evaluate the symptoms and signs of individuals experiencing depression. It consists of 21 items, which are divided into two categories: 15 items related to psychological symptoms of depression, such as "I feel sad at times" and "I feel discouraged about the future," and 6 items related to physical symptoms, such as "My weight has decreased by about 2 kilograms" and "I worry about minor illnesses." The questionnaire uses a 4-point Likert scale, with scoring and interpretation based on the respondent's perception: 0 indicates no symptoms, 1 indicates mild symptoms, 2 indicates moderate symptoms, and 3 indicates severe symptoms. The total score is calculated by summing all item scores, with a possible range from 0 to 63. The severity of depression is classified into five levels: 0–9 points indicate no depression (normal range), 10–15 points indicate minimal depression, 16–19 points indicate mild to moderate depression, 20–29 points indicate moderate to severe depression, and 30–63 points indicate severe depression. The original Thai version of the questionnaire underwent quality assessment,

revealing a content validity index (CVI) of 0.84 and a reliability coefficient (Cronbach's alpha) of 0.92. The sensitivity of the tool was 84.6%, and its specificity was 86.4[19]. In this study, the Cronbach's alpha coefficient was found to be 0.88, indicating good reliability.

Part 4: The General Health Questionnaire-28 (GHQ-28) developed by the Department of Mental Health, Ministry of Public Health, is based on the General Health Questionnaire (GHQ) by Goldberg[20]. This instrument assesses individuals perceived mental health status based on physical, psychological, and social responses, does not specifically measure depressive symptoms. The questionnaire was developed and translated into Thai using the back-translation process by Thana, Chukkrik, and Chatchawal[21]. It consists of 28 items divided into 4 groups, each containing 7 questions as follows: Group 1, items 1-7, assess somatic symptoms related to psychological causes, such as "feeling unwell" and "headache or pain"; Group 2, items 8-14, assess anxiety and insomnia, for example, "feeling tense all the time" and "feeling irritable and in a bad mood"; Group 3, items 15-21, assess social dysfunction, such as "doing things slower than usual" and "feeling able to make decisions"; and Group 4, items 22-28, assess severe depression, such as "thinking of oneself as worthless" and "feeling that life is not worth living." The response format uses a 4-level rating scale with 4 options per question. Options 1 and 2 indicate no psychiatric symptoms for that item, while options 3 and 4 indicate the presence of psychiatric symptoms. Scoring is done on a 0-0-1-1 basis[22].The total possible score ranges from 0 to 28. Higher scores indicate more mental health problems. A cutoff score of 6 is used; respondents scoring 6 or higher are considered to have mental health problems, while those scoring 5 or lower are considered not to have mental health problems[23]. The questionnaire has Cronbach's alpha reliability coefficients for each group ranging from 0.84 to 0.94, sensitivity ranging from 78.1% to 85.3%, and specificity ranging from 84.4% to 89.7%[24]. For this study, the overall Cronbach's alpha reliability coefficient was 0.92, with group-specific values ranging from 0.80 to 0.90.

4. Data Collection

This study was conducted to collect data from December 15, 2024, to February 28, 2025. The researchers coordinated with a team of research assistants responsible for collecting data using questionnaires at each educational institution. Before data collection, the researchers held a meeting with the research assistants to ensure a shared understanding regarding the selection of samples and the proper administration of the questionnaires. Prior to collecting data from the participants, detailed information about the study was provided, including the objectives, potential benefits, and possible risks. Participants were then asked to provide informed consent before

completing the questionnaires. It took approximately 30 minutes to complete the questionnaire, and participation was entirely voluntary.

5. Data Analysis

Before analyzing the data, the researchers checked the accuracy and completeness of the data. The data were then processed and analyzed using IBM SPSS version 29.0. The data analysis was divided according to the stages of the study as follows: (1) Instrument Development and Psychometric Testing Stage: The researchers analyzed the overall content validity using the Content Validity Index (CVI), examined the consistency between each item and the intended objectives using Item-Objective Congruence (IOC), and assessed internal consistency by calculating Cronbach's Alpha coefficient. The criteria set by the researchers were CVI ≥0.70, IOC ≥0.80, and Cronbach's Alpha ≥0.80. (2) Instrument Relationship and Influence Testing Stage: The researchers used descriptive statistics to summarize the characteristics of the sample, levels of psychological capital, depression, and mental health status. The relationships between psychological capital, depression, and mental health among university students were analyzed using correlation coefficients. Multiple regression analysis was employed to identify predictive influences.

Result

1. Instrument Development and Psychometric Testing Stage

(1) Content Validity Testing: The content validity of the Psychological Capital Assessment Scale for university students was evaluated by five experts from relevant fields. These experts included two specialists in measurement and evaluation and three specialists in psychology, with expertise in positive psychology and developmental psychology. The evaluation showed consistency between the questionnaire items and the intended objectives, demonstrated by the Item-Objective Congruence (IOC) and the overall Content Validity Index (CVI) of the questionnaire, as presented in Table 1.

Table 1 Content Validity Index (CVI) for Each Component of the Psychological Potentials Assessment Scale

Components	CVI	Question items		
		Choose	Improve / Add	Exclude
Problem-solving ability	0.75	8	2	-
Organized thinking ability	0.74	7	3	-
Self-regulation ability	0.80	7	3	-
Self-efficacy ability	0.85	9	1	-
Relationship ability	1	10	-	-

(2) Results of the internal consistency assessment using Cronbach's Alpha coefficient: It showed that the researcher administered the revised Psychological Capital Assessment Scale for university students, improved based on expert feedback, to a sample of 400 participants. The reliability results for each component and the overall scale are presented in Table 2.

Table 2 Reliability of the Psychological Potentials Assessment Scale for Students Using Cronbach's Alpha Coefficient (n = 400)

Components	Cronbach Alpha's coefficient	Reliability Level
Problem-solving ability	0.70	Acceptable
Organized thinking ability	0.60	Acceptable
Self-regulation ability	0.73	Good
Self-efficacy ability	0.80	Good
Relationship ability	0.81	Good
Overall	**0.90**	Excellent

2. Assessment of the Relationship and Influence of Psychological Capital on Depression and Mental Health Deviation among University Students Stage

(1) General characteristics of the sample**:** A total of 400 participants completed the questionnaire, accounting for 97.80%. The majority were female (73.5%), with an average age of 20.47 years (SD = 2.7). About 30.8% were studying in health science programs. The average monthly income was 11,422.21 baht (SD = 23.80), and the average monthly expense was 8,803.56 baht (SD = 15.74). Regarding family background, 58.7% of the students had married parents, and 53.1% lived with either their father or mother. Most participants (89.2%) practiced Buddhism, and 79.5% reported concerns about their academic performance.

(2) Levels of psychological capital, depression, and mental health**:** The sample had an average psychological capital score of 113.96 (SD = 12.85), an average depression score of 9.47 (SD = 7.11), and an average mental health score of 17.40 (SD = 10.60). These findings indicate that university students had high psychological capitals, no depression or only minimal depressive symptoms, and no mental health problems.

(3) Relationship between psychological capitals, depression, and mental health: The Pearson correlation analysis showed that psychological capitals were negatively correlated with both depression (r = –.382) and mental health problems(r = –.382). In contrast, depression was positively correlated with mental health problems (r = .755). These results indicate that students with higher psychological capitals are at a lower risk of experiencing depression and mental health problems.

(4) The influence of psychological capitals on depression and mental health problems among university students: The results of multiple regression analysis showed that psychological capitals could explain 25% of the variance in mental health (R^2= .250), with a multiple correlation coefficient (R) of .500, which is considered a moderate level. Psychological capitals could also explain 28% of the variance in depression (R^2= .280), with a multiple correlation coefficient (R) of .529, which is also at a moderate level. In addition, the F-test for the change in R^2 was statistically significant, indicating that psychological capitals could predict the occurrence of depression and mental health problems, as shown in Table 3.

Table 3 Predictive Influence of Psychological capitals on Depression and Mental Health Problems

Variable	R^2 depression	F	p	R^2 mental health	F	p
Psychological Potential	.280	31.384	000***	.250	26.875	000***

(5) Predictive influence of each component of psychological capital of depression and mental health problems among university students. The results of the multiple regression analysis showed that self-efficacy, problem-solving, and self-regulation had negative coefficients, indicating a negative relationship with depression. Meanwhile, the organized thinking and relationships showed positive coefficients, indicating a positive influence on depression. The predictive equation is as follows: Depression = 28.466 – 0.708(Self-efficacy) - 0.783(Problem-solving) + 0.699(Organized thinking) - 0.251(Self-efficacy) + 0.221(Relationship). As for mental health problems, they were influenced by self-efficacy, problem-solving, self-regulation, and organized thinking, with self-efficacy being the most significant predictive factor. The predictive equation is as follows: Mental health = 49.521 – 1.110(Self-efficacy) – 0.701(Problem-solving) + 0.949(Organized thinking) – 0.152(Self-regulation) (Table 4).

Table 4 Predictive Influence of Each Component of Psychological capital on Depression and Mental Health Problems

Variable	*B* *Depression*	*beta*	*p*	*B* *Mental health*	*beta*	*p*
(Constant)	28.466	–	.000***	49.521	–	.000**
Self-efficacy	-0.708	-0.404	.000***	-1.110	-0.400	.000***
Problem-solving	-0.783	-0.321	.000***	-0.701	-0.181	.003***
Organized thinking	0.699	0.274	.000***	0.949	0.235	.000***
Self-regulation	-0.251	-0.124	.026**	-0.486	-0.152	.005***
Relationship	0.221	0.112	.026**	0.214	0.068	.184

Discussion

Phase 1: Development of the Psychological Capital Assessment Tool for University Students. It was found that the assessment tool demonstrated strong psychometric properties in terms of both validity and reliability. The content validity, calculated using the Index of Item-Objective Congruence (IOC), was 0.84, indicating that each item corresponded well with the intended measurement objectives. The Content Validity Index (CVI) ranged from 0.74 to 1, reflecting that the overall content of the tool was aligned with the construct it aimed to assess. The internal consistency, evaluated using Cronbach's Alpha, was 0.90, which is considered a good level of reliability, appropriate for use in psychological research. These findings suggest that the psychological capital assessment tool for university students effectively measures the intended constructs and aligns with the targeted goals of the study. The tool also demonstrates measurement stability[17,25]. Therefore, the results support that this assessment is suitable for psychological research within the Thai social context, particularly among university students—a group known to be vulnerable to stress and emotional changes. Moreover, the development of a mental health assessment tool with strong measurement properties—validity, reliability, accessibility, and contextual appropriateness—plays a crucial role in the effective screening and management of mental health issues[26].

Phase 2: Assessment of the Relationship and Influence of Psychological Capital on Depression and Mental Health Problems among University Students. It was found that the psychological capital of university students had a negative correlation with depression and mental health problems, indicating that individuals with stronger psychological capital are at a lower risk of developing depression and mental health issues. This finding aligns with the study of Prasath et al.[27], which found that quality of life mediates the relationship between psychological capital and mental health problems. Therefore, promoting mental health through the enhancement of positive psychological capital plays an important role in improving the quality of life of university students. When considering the components of psychological capital—including the ability to cope with problems and obstacles, systematic thinking ability, self-regulation, self-awareness, and the ability to live with others—it was found that all of these serve as key psychological resources in reducing and preventing mental health problems. This is supported by the research of Wu, Mah, Yap, Fam, & Tan,[28] which revealed that self-perceived capability and competence negatively correlate with psychological problems, helping to reduce stress and the risk of depression. In addition, the study by Luo, Hu, Zhang, Mei, Tang, & Luo[29] found that psychological resilience in problem management is a key predictor of students' mental health and highlighted the importance of social support and coexistence with others in building strong psychological capital and good mental health[30].

Furthermore, research conducted during the COVID-19 pandemic supports that psychological resilience in handling challenges, social support, and self-efficacy are protective factors for students' mental health[31]. It can be observed that psychological capital is significantly related to mental health, which in turn affects students' academic adjustment and learning outcomes. Students with mental health problems tend to have lower academic performance[32]. Conversely, positive psychological capital or psychological potential plays an essential role in supporting overall good mental health among students[33].

Based on the empirical evidence presented above, it is evident that the components of psychological capital can significantly predict depression and mental health problems. Self-efficacy is significantly and negatively associated with both depression and mental health issues. That is, when students are aware of their own capabilities, they tend to have better mental health and a lower likelihood of experiencing depression. This is consistent with Bandura's Self-Efficacy Theory [34], which states that self-efficacy is a central mechanism in regulating emotional behavior and is a key factor in reducing stress, hopelessness, and depressive symptoms. Similarly, the

study by Kamil & AL-Hadrawi[35] found that self-efficacy affects mental well-being in both males and females. The more individuals believe in their own capabilities, the better their psychological well-being.

Other aspects—such as the ability to cope with problems and obstacles, systematic thinking, self-regulation, and the ability to get along with others—also influence depression and mental health. It can thus be discussed that if students possess problem-solving skills, planning abilities, self-control and emotional regulation, critical thinking, and optimism, these psychological resources can play a vital role in coping with stress, effectively reducing the negative impacts on mental health, and contributing to long-term emotional well-being. These findings are consistent with previous research which found that optimism promotes positive emotions and quality of life while reducing negative emotions and mental health problems[36]. Likewise, problem-solving ability is a key personal trait that helps manage emotional challenges or stress, leading to hope and a sense of confidence in handling future challenges[37]. The development of problem-solving skills may contribute to a reduction in internalizing problems and negative emotional states, including sadness, anxiety, and guilt[38]. The capacity to manage problems promotes sustained emotional well-being. Mental health and well-being in adolescence, including functional capacities such as self-efficacy and the ability to cope with everyday challenges, have been shown to predict better long-term outcomes and lower risks of mental illness and negative emotional states[39].

The ability to regulate and control emotions, as well as problem-solving skills, plays an important role in the mental health of students by helping to reduce self-harming behaviors. Individuals who have thoughts of self-harm often struggle because they are unable to choose appropriate coping strategies or adapt effectively[40]. It is notable that the ability to coexist and build relationships with others—reflecting the role of social support—can act as a buffering factor against stress and help prevent depression. This aligns with various studies that highlight social support as a key factor in fostering encouragement and reducing depression among adolescents [41,42,43].

Conversely, if individuals experience adverse situations from friends or those around them—such as being controlled, threatened, or devalued—it can lead to increased stress, insomnia, reduced concentration, and a lack of motivation to study [44,45,46].

Conclusion

The research findings can be summarized as indicating that the level of psychological capital among university students is significantly associated with lower levels of depression and better mental health. Promoting mental health by enhancing the five dimensions of psychological capital — self-efficacy, problem-solving, self-regulation, organized thinking, and relationship — can effectively prevent and reduce mental health problems, especially depression. Furthermore, this promotion positively impacts academic achievement and serves as a key mechanism to improve the quality of life among higher education students. Therefore, relevant stakeholders can utilize the psychological capital assessment tool to screen university students at risk of depression and mental health problems. Additionally, the components of the assessment can be used to develop care programs aiming at enhancing psychological capital within educational institutions, focusing on skills such as self-efficacy, problem-solving, critical thinking, emotional regulation, and interpersonal communication. Future refinement of the psychological potential assessment tool should focus on strengthening its psychometric integrity and clarifying its construct structure. The limited internal consistency of the organized thinking subscale highlights the need for systematic item revision. Establishing structural validity remains essential, and future studies should employ both exploratory and confirmatory factor analyses with independent samples. The unexpected positive associations between organized thinking, relationship components, and depressive symptoms warrant further investigation that considers academic and interpersonal contexts. Methodological enhancements—such as longitudinal designs, test–retest reliability assessments, and more diverse sampling—would improve evaluations of temporal stability and generalizability. Together, these steps will support ongoing refinement of the instrument and reinforce its value as an evidence-based screening measure in university mental health settings.

Ethical Approval Statement

The research received ethical approval from the Mahidol University Institutional Review Board (MU-MOU MUSSIRB NO 2024/077) dated October 24, 2024. All research procedures followed the guidelines of the Declaration of Helsinki. Participants were fully informed about the study and gave written informed consent voluntarily. They were free to participate and could withdraw from the study at any time. All data were strictly kept confidential, and the research results will be used solely for academic purposes.

Author Contributions

PS, as the first author, led the study, contributed to the study design, coordinated and participated in data collection and analysis, assisted with data interpretation, and drafted and revised the manuscript. SS, as the corresponding author, conceived and designed the study, developed the assessment tool, supervised data collection, conducted data analysis and interpretation, and provided critical revisions. AS and PPT assisted with data collection and critically reviewed the manuscript for important intellectual content. All authors approved the final manuscript and accept responsibility for its accuracy and integrity.

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Conflicts of Interest

This research was conducted independently, without any commercial or financial support that could have resulted in conflicts of interest.

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