ISSN:3068-9376

Frontiers in Preventive Medicine

DOI: 10.64904/fpm25012

Original Research

Pathways to Mental Health Among College Students: The Mediating Roles of Emotion and Cognition

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Abstract

This study investigates the pathways influencing mental health among college students, specifically examining the mediating roles of cognitive processes in the relationship between emotional experiences and psychological well-being. Using a sample of 381 undergraduate students, this research explores how positive and negative emotions directly and indirectly affect mental health through cognitive flexibility. Statistical analyses, including independent samples t-tests and mediation modeling, reveal that while no significant gender differences exist in emotional experiences or overall mental health, males exhibit higher levels of cognitive flexibility compared to females. The results demonstrate that cognitive flexibility significantly mediates the relationship between emotions and mental health; positive emotions enhance well-being by fostering adaptive cognitive frameworks, whereas negative emotions hinder mental health by constraining such flexibility. These findings highlight the critical role of cognitive adaptation in psychological adjustment and provide empirical support for developing targeted interventions that integrate emotion regulation and cognitive training to improve the overall well-being of college students.

Keywords: positive emotions, negative emotions, cognitive flexibility, mental health, college students

1 Introduction

1.1 Research Necessity and Objectives

College students are navigating a critical transitional phase from adolescence to adulthood, facing numerous psychological challenges. Environmentally, they encounter diverse changes. Unlike the passive learning approach in junior high and high school, university requires students to engage in active learning, placing high demands on their independence and autonomy. Simultaneously, as they build extensive inter-personal networks, concerns about future career paths arise. Additionally, tasks such as managing credits and pursuing various certifications impose heavy burdens, collectively leading to significant psychological pressure. Moreover, societal issues like rising youth unemployment and exorbitant tuition fees further exacerbate depression and stress among university students. In this hy-per-competitive social environment, an increasing number of students experience psychological distress, with their sense of well-being facing severe threats. Existing research data indicates that the level of well-being among Chinese university students remains relatively low [1]. It is worth noting

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that university life is not only the starting point for positive transformation but also a transitional period from adolescence to adult-hood. The level of happiness experienced during this stage profoundly impacts their future development. Therefore, how to enhance the happiness of Chinese university students and formulate corresponding support measures deserves our high attention.

Research on well-being can broadly be divided into studies of subjective well-being and mental health. Subjective well-being focuses on an individual's overall perception and experience of life. Mental health, however, is a concept grounded in the theory of self-actualization, aiming to address certain limitations in subjective well-being research. Ryff (1989) defined mental health as "accepting one's true self, maintaining positive relationships, possessing the ability to regulate one's behavior, mastering one's environment, and having clear life goals," characterizing it as a state of being motivated and com-mitted to realizing one's potential [2]. Happiness cannot be fully captured by positive emotions, experiences, or life satisfaction alone; it should be viewed as a comprehensive concept encompassing an individual's psychological well-being and effective functioning. Therefore, in this study examining college students' well-being, we will focus on psychological well-being grounded in a multi-theoretical framework rather than subjective well-being [3].

Previous studies on college students have extensively explored the relationship between various variables and mental health, such as stress [4-5], social support [6-7], and parental attitudes [8-9]. However, current research on the impact of emotions and cognition on mental health remains insufficient. Therefore, this study aims to delve into the intrinsic connections among emotions, cognition, and mental health among college students. As a key factor influencing mental health, emotions are typically categorized into positive and negative emotions in research. Positive emotions embody enthusiasm, vitality, and life force, encompassing diverse experiences such as happiness, pride, love, relief, hope, empathy, and aesthetic appreciation. Negative emotions, conversely, reflect subjective distress and discomfort, including anger, fear, anxiety, guilt, shame, sad-ness, jealousy, and disgust [10]. Although positive and negative emotions are often viewed as opposing concepts, emotion research treats them as two distinct and non-homogeneous dimensions [11]. Therefore, a comprehensive approach that considers both positive and negative emotions is more thorough and appropriate than examining only one component of emotion.

Cognitive flexibility, a crucial cognitive trait influencing mental health, refers to an individual's ability to adaptively adjust their cognitive framework in response to changing environmental stimuli [12]. It encompasses the tendency to perceive challenging situations as controllable and the capacity to devise multiple alternative solutions to events. During the period of rapid psychological change that is university life, flexible cognitive abilities significantly impact an individual's adaptation and mental health [13-14]. Previous research indicates that individuals with high cognitive flexibility demonstrate greater environmental adaptability [15] and higher levels of well-being [16].

Furthermore, cognitive flexibility influences life satisfaction and well-being [17-18]. It follows that cognitive flexibility also impacts mental health. Emotions and cognition are closely intertwined [19-20]. Specifically, emotions can induce changes in cognitive processes [21], with positive emotions exerting beneficial effects [22-23] and negative emotions producing detrimental impacts [24-25]. It follows that emotions can influence mental health both directly and indirectly through cognitive path-ways. Previous research confirms emotions positively impact individuals' lives via cognitive mechanisms [26], with positive emotions affecting life satisfaction through cognitive characteristics [27].

Positive emotions promote comprehensive cogntion across domains, while negative emotions hinder flexible thinking [28]. In this study, we hypothesize that cognitive flexibility serves as a key moderator in the relationship between emotions and

mental health.

Specifically, cognitive flexibility describes an individual's ability to shift thinking based on environmental contexts, making it a suitable construct for examining emotions' effects on cognitive expansion and contraction. Both positive and negative emotions, as well as cognitive flexibility, directly influence mental health. Furthermore, positive and negative emotions are expected to indirectly affect mental health through cognitive flexibility. Positive emotions promote broad and flexible cognition, thereby enhancing well-being, while negative emotions may produce the opposite effect. Given that college students experience diverse emotions while developing advanced cognitive functions, both variables must be considered simultaneously to comprehensively understand their mental health status. Therefore, this study aims to clarify the specific effects of emotions and cognition on college students' mental health and to validate the role of positive and negative emotions in mental health through cognitive flexibility. Additionally, gender differences in positive emotions, negative emotions, cognitive flexibility, and mental health warrant further exploration. Research indicates that males tend to experience positive emotions more readily than females, while females are more prone to negative emotions [29-30]. However, other studies have suggested no gender differences in positive or negative emotions [31]. Furthermore, findings on gender differences in cognitive flexibility remain inconsistent [32]. Regarding mental health, while men exhibit higher overall health levels than women, specific sub-factors yield varying results [33-34]. Therefore, it is necessary to re-examine gender differences in positive and negative emotions, cognitive flexibility, and mental health to provide targeted, differentiated support where disparities exist.

In summary, this study aims to investigate whether gender differences exist in the relation-ships among positive and negative emotions, cognitive flexibility, and mental health among college students, while comprehensively examining the specific effects of positive and negative emotions and cognitive flexibility on mental health. Specifically, we will examine the mediating role of cognitive flexibility in the relation-ship between positive and negative emotions and mental health. Furthermore, we expect these findings to serve as foundational data for devel-oping support programs that promote well-being among college students.

Compared with previous studies that have mainly examined the independent effects of emotions or cognitive factors on mental health, this study extends prior research by integrating both perspectives into a unified analytical framework. Specifically, it simultaneously investigates the direct and indirect pathways through which positive and negative emotions affect mental health via cognitive flexibility, thereby clarifying the cognitive mechanisms underlying emotional in-fluences. Furthermore, by incorporating gender comparisons, this study provides new empirical evidence on gender-based variations in cognitive flexibility and its mediating function—an area that remains underexplored in the existing literature. These contributions highlight the study's novelty in bridging emotional and cognitive do-mains to deepen understanding of college students' psychological well-being.

1.2 Research Questions

To achieve the aforementioned research objectives, the following research questions are posed.

Research Question 1: Do gender differences exist in positive and negative emotions, cognitive flexibility, and mental health among college students?

Research Question 2. Does cognitive flexibility mediate the relationship between positive and negative emotions and mental health among college students?

2 Research Methodology

2.1 Research Participants

This study selected 381 undergraduate students from four four-year universities in Wuhan, Hubei Province, China as research subjects. During the data collection process, a total of 395 questionnaires were distributed and 390 were successfully collected, with a response rate of 98.73%. In the process of further screening valid questionnaires, those who answered inaccurately or carelessly were

excluded. Finally, 381 valid questionnaires (accounting for 97.69% of the returned questionnaires) were confirmed for subsequent analysis. In terms of gender distribution, the sample included 195 male participants (51.18%) and 186 female participants (48.82%). The average age of the participants is 20.61 years old, with a standard deviation of 2.19. In terms of grade distribution, 142 participants were second grade students (37.27%), 129 were third grade students (33.86%), and 110 were fourth grade students 28.87%.

2.2 Measurement Tools

This study employed the Positive and Negative Affect Schedule (PANAS), the Cognitive Flexibility Scale, and the Mental Health Scale.

2.2.1 Positive and Negative Affect Scales

The Emotional Experience Scale developed by Eun Gyeong Lee et al. (2006) was adopted to assess participants' positive and negative emotional states. This scale was constructed based on Watson's (1988) emotional classification frame-work and drew upon concepts from the Positive and Negative Affect Schedule (PANAS) [35-36]. It comprises 57 items covering two primary sub-dimensions: positive emotions and negative emotions. Higher scores on the positive emotion dimension indicate individuals more frequently experience positive feelings such as happiness, pride, love, hope, gratitude, and satisfaction. Conversely, higher scores on the negative emotion dimension reflect individuals frequently ex-perienceing negative emotions like frustration, sadness, and betrayal, with related items including "sadness," "disappointment," and "anger." The scale employs a 4-point Likert scale, ranging from "Not at all" to "Very much," scored from 1 to 4 respectively. In this study's analysis, the positive emotion dimension achieved a Cronbach's α coefficient of .94, while the negative emotion dimension attained .93, both demonstrating excellent internal consistency re-liability.

2.2.2 Cognitive Flexibility Inventory

In this study, we selected the Cognitive Flexibility Inventory (CFI) developed by Dennis and Vander Wal (2010) as the assessment tool to quantify participants' cognitive flexibility levels. This scale features 18 carefully designed items, comprising 12 positively worded statements and 6 reverse-scored (i.e., negatively worded) statements [37]. The scale structure encompasses two core sub-factors: Substitution Factor and Control Factor. Scoring employs a 7-point Likert scale, where participants rate items from "Not at all true" (1 point) to "Very true" (7 points) based on their actual experiences. Consequently, the total CFI score ranges from 18 to 126 points, with higher scores indicating greater cognitive flexibility. In this study's data collection and analysis, the overall Cronbach's α coefficient for all items reached 0.89, further validating the scale's reliability. At the sub-factor level, the Cronbach's α coefficient for the substitution factor was 0.89, and for the control factor, it was 0.85. Both values indicate the scale's sound applicability in this research.

2.2.3 Psychological Well-Being Scale

This study employed the Psychological Well-Being Scales (PWBS) developed by Ryff (1989) to assess participants' psychological well-being [2]. The scale comprises 44 items, with 22 positively worded questions and 22 negatively worded questions (i.e., reverse-scored). The scale structure encompasses six key subscales: self-acceptance, quality of relationships, self-regulation, environmental mastery, sense of purpose in life, and personal growth. For scoring, the PWBS employs a 6-point Likert scale, re-quiring participants to rate each item based on their genuine feelings, ranging from "Not at all true" (1 point) to "Very true" (6 points). Accordingly, the total mental health score ranges from 44 to 264 points, with higher scores indicating better mental health. In this study's data analysis, the overall Cronbach's α coefficient reached 0.93, demonstrating excellent internal consistency. For each sub-dimension, the Cronbach's α coefficients were as follows: Self-Acceptance 0.84, Interpersonal Relationships 0.84, Self-Discipline 0.77, Environmental Adaptation 0.76, Life Goals 0.81, and Personal Growth 0.70. These values collectively confirm the reliability and stability of the scale in this study.

2.3 Data Analysis

Data analysis was conducted using SPSS soft-ware, following this methodology: First, to ensure the reliability and validity of the measurement tools, we performed validity and reliability tests. Second, to comprehensively characterize the research subjects, descriptive statistical analysis was conducted. This involved calculating frequency distributions, means, standard deviations, and other statistical measures to outline the basic profile of the participants. Next, to investigate differences in positive emotions, negative emotions, cognitive flexibility, and mental health between male and female college students, t-tests were employed. By comparing mean differences between gender groups, potential gender effects were revealed. Finally, to delve into the potential mediating role of cognitive flexibility in the relationship between positive emotion, negative emotion, and mental health among college students, we employed multiple regression analysis within a mediation framework [38]. We further validated the mediating effect through Sobel tests to clarify the specific pathways of cognitive flexibility within this complex relationship [39]. Although demographic factors such as age, academic year, and socioeconomic background may influence emotional and cognitive development, they were not included as control variables in the current analyses. Future studies should incorporate these variables to further clarify their potential moderating or confounding effects on the relationships examined in this study.

3 Research Findings

3.1 Positive and Negative Emotions, Cognitive Flexibility, and Mental Health Among College Students by Gender

To investigate whether statistically significant gender differences exist in positive emotions, negative emotions, cognitive flexibility, and mental health among college students, this study employed independent samples t-tests for analysis. The relevant results are presented in Table 1. The analysis revealed no significant gender differences in positive or negative emotions. How-ever, a highly significant statistical difference existed between genders in cognitive flexibility ($t = 3.80$, $p < .001$). Further breakdown revealed that overall cognitive flexibility scores were higher for males ($M = 4.95$, $SD = .78$) than females ($M = 4.74$, $SD = .75$). Regarding sub-factors of cognitive flexibility, males also scored higher on the substitution sub-factor ($M = 5.19$, $SD = .86$) compared to females ($M = 5.01$, $SD = .83$). and in the control factor, males scored higher ($M = 4.72$, $SD = 1.02$) than females ($M = 4.52$, $SD = 1.08$). Concurrently, the study found no significant gender differences in college students' mental health status at the overall level or across any sub-factors. In addition to statistical significance, effect sizes were calculated to evaluate the magnitude of observed effects. For gender differences, Cohen's d values ranged from 0.27 to 0.41, indicating small to moderate effects, with the largest difference found in overall cognitive flexibility ($d = 0.41$).

Table 1: Mean Values, Standard Deviations, and Independent Samples t-Tests for Positive and Negative Emotions, Cognitive Flexibility, and Mental Health by Gender Among College Students

		Male (n=195)	Female (n=186)	*t*
		M(SD)	*M(SD)*	
Emotion	Positive Emotion	2.48(.52)	2.71(.48)	-1.37
	Negative Emotions	2.39(.46)	2.52(.49)	-1.03
Cognitive Flexibility	Alternative Factors	5.19(.86)	5.01(.83)	2.89**
	Control Factors	4.72(1.02)	4.62(1.12)	2.60**
	Overall	4.95(0.69)	4.74(0.75)	3.80***
Mental Health	Self-Acceptance	3.90(.75)	4.03(.79)	-.99
	Interpersonal Relationships	4.38(.67)	4.45 (0.83)	.70
	Autonomy	3.61 (0.73)	3.81(0.71)	.96
	Environmental Adaptability	3.80 (0.70)	3.83 (0.67)	1.85

Life Goals	4.25 (0.80)	4.41(.79)	-.35
Personal Growth	4.30(.75)	4.39(.72)	-.25
Overall	4.13(.59)	4.12(.60)	.16

**p < .01, ***p < .001

3.2 Mediating Effect of Cognitive Flexibility on the Relationship Between Positive and Negative Emotions and Mental Health Among College Students

Before examining whether cognitive flexibility mediates the relationship between students' positive and negative emotions and mental health, Pearson correlation coefficients were calculated, with results shown in Table 2. Positive emotions were positively correlated with overall mental health (r=.62, p<.001), while negative emotions were negatively correlated with overall mental health (r=-.62, p<.001). Overall cognitive flexibility among college students was significantly positively correlated with overall mental health (r=.78, p<.001). Furthermore, positive emotions positively correlated with overall cognitive flexibility (r = .42, p < .001), while negative emotions negatively correlated with overall cognitive flexibility (r = -.55, p < .001).

To precisely examine the mediating role of cognitive flexibility in the relationship between positive emotion, negative emotion, and mental health among college students, this study strictly followed Baron and Kenny's (1986) mediation effect testing model. Multivariate regression analysis was conducted in three steps: First, regression analysis tested the influence of independent variables (positive emotion, negative emotion) on the mediating variable (cognitive flexibility); Step 2 examined the direct effect of independent variables on the dependent variable (psychological well-being); Step 3 incorporated both independent and mediating variables into the regression equation to observe changes in the effect of independent variables on psychological well-being after introducing cognitive flexibility. If the independent variables' effect on the de-pendent variable is significantly stronger without the mediating variable than with it, partial mediation is determined. If the independent variables' effect on the dependent variable becomes insignificant after introducing the mediating variable, full mediation is determined. The mediation effect is ultimately validated by comparing the changes in the degree of influence. Specific results are detailed in Tables 3 and 4.

Table 2: Relationships Among Positive and Negative Emotions, Cognitive Flexibility, and Mental Health Among College Students

		Emotion				Cognitive Flexibility				Mental Health			
		Positive Emotion	egative Emotions	Substitute factors	Controlling Factors	Holistic	Self-acceptance	Interpersonal Relationships	Self-discipline	Environmental Adaptation	Life Goals	Personal Growth	Holistic
Emotions	Positive Emotions		-.47***	.23*	.43 **	.42**	.63**	.34***	.36*	.62**	.49**	.47***	.62**
	Negative Emotions			-.28*	-.61**	-.55***	-.59**	-.46***	-.34**	-.57*	-.48***	-.39***	-.62***
Cognitive Flexibility	Alternative Factors				.48 **	.88*	.42***	.43***	.46***	.47***	.54***	.48***	.57***
	Control Factors					.83***	.65**	.57***	.60***	.70**	.63***	.62***	.77***
	Overall						.64***	.62***	.61***	.69***	.70***	.59***	.78***

**p < .01, ***p < .001

This study first examined the mediating role of cognitive flexibility in the relationship between positive emotions and mental health among college students. Data analysis revealed that positive emotions, as the independent variable, significantly predicted cognitive flexibility (mediating variable) (β = .42, p < .001) and also significantly directly influenced mental health (dependent variable) (β = .62, p < .001). Further mediation analysis revealed that when both positive emotion and cognitive flexibility were included in the regression model, the direct effect of positive emotion on mental health decreased to β = .36, indicating that cognitive flexibility partially mediated this relationship. Sobel's test

(1982) con-firmed the statistical significance of this mediating path (z = 6.42, p < .001). The integrated findings suggest that positive emotions among college students influence mental health both through a direct pathway and indirectly via cognitive flexibility. For mediation analyses, changes in adjusted R^2 between steps of the regression models indicated that including cognitive flexibility explained an additional 33% of the variance in mental health, demonstrating its substantial mediating contribution.

Table 3 Mediating Effect of Cognitive Flexibility in the Relationship Between Positive Emotions and Mental Health Among College Students

	Mediation Effect Testing Phase	*β*	*adj* R^2	*F*
①	Positive Emotion → Cognitive Flexibility	.42***	.17	81.17***
②	Positive Emotion → Mental Health	.62***	.38	236.66***
③	Positive Emotions → Mental Health	.36***	.71	467.73***
	Cognitive Flexibility → Mental Health	.63***		

***p<.001

Table 4 Mediating Effect of Cognitive Flexibility on the Relationship Between Negative Emotions and Mental Health in College Students

	Mediation Effect Testing Phase	*β*	*adj* R^2	*F*
①	Negative Emotion → Cognitive Flexibility	-.55***	.30	164.37***
②	Negative Emotions → Mental Health	-.62***	.38	236.66***
③	Negative Emotions → Mental Health	-.27***	.66	368.03***
	Cognitive Flexibility → Mental Health	.63***		

***p<.001

This study investigated whether cognitive flexibility mediates the relationship between negative emotions and mental health among college students. Negative emotions, as the independent variable, exerted a significant negative effect on cognitive flexibility (mediating variable) (β = -0.55, p < 0.001), while also having a significant negative direct effect on mental health (dependent variable) (β = -0.62, p < 0.001). Further mediation analysis revealed that when both negative emotions and cognitive flexibility were included in the regression model, the direct effect of negative emotions on mental health weakened to β = -0.27, indicating partial mediation by cognitive flexibility. Sobel tests (1982) confirmed this mediating path with high statistical significance (z = -7.18, p < 0.001). Comprehensive analysis indicates that negative emotions among college students negatively impact mental health not only through direct pathways but also exacerbate mental health risks via an indirect pathway by impairing cognitive flexibility.

4 Conclusion

This study systematically examined gender differences in positive and negative emotions, cognitive flexibility, and mental health among college students, and further explored the mediating role of cognitive flexibility in the relationship between emotions and mental health. Using data from 381 undergraduates at four universities in Wuhan, the study combined descriptive statistics, t-tests, correlations, and regression analyses to clarify the direct and indirect mechanisms linking emotional and cognitive factors to psychological well-being.

Results revealed no significant gender differences in positive or negative emotions and overall mental health, whereas males showed higher cognitive flexibility across both substitution and control subdimensions. The magnitude of these gender effects, measured by Cohen's d, ranged from 0.27 to 0.41, indicating small to moderate differences, with the

largest observed in overall cognitive flexibility (d = 0.41). The absence of gender gaps in emotional experience contrasts with earlier research reporting that men experience more positive emotions and women more negative ones [40-41]. However, it aligns with recent Chinese studies showing narrowing emotional disparities [42], possibly due to changing social roles, cultural norms, and generational value shifts that influence emotional expression.

Gender differences in cognitive flexibility observed in this study may reflect males' relative advantage in cognitive control processes rather than creative or social flexibility. Previous in-consistencies in findings may stem from variations in conceptual definitions and measurement instruments. The present study's use of the Cognitive Flexibility Inventory focused specifically on adaptive control and substitution abilities, thereby offering a more precise view of core cognitive mechanisms. Although gender differences in overall mental health were nonsignificant, subtle variations across subdomains—such as self-acceptance, environmental mastery, and life purpose—suggest dynamic adaptation to shifting gender role expectations among university students. Future research should employ longitudinal designs to examine whether these differences remain stable or evolve as students transition into adulthood.

Mediation analyses provided further insights into the mechanisms underlying the emotion–health link. Cognitive flexibility was found to partially mediate the effects of both positive and negative emotions on mental health. Specifically, positive emotions not only had a direct beneficial effect on mental health but also enhanced it indirectly by increasing cognitive flexibility, which enables adaptive reframing of challenges and regulation of thoughts in response to environmental demands. Conversely, negative emotions impaired mental health both directly and indirectly by constraining cognitive flexibility and narrowing adaptive thinking. In the mediation models, including cognitive flexibility increased the explained variance in mental health by approximately 31%, indicating a substantial mediating effect. These findings underscore the importance of cognitive flexibility as a psychological path-way through which emotions exert influence on overall well-being.

Theoretically, this study extends prior research by integrating emotional and cognitive perspectives into a unified analytical framework, demonstrating how affective states and adaptive cognition interact to influence psychological health. Previous studies typically examined emotions or cognition in isolation; the present study empirically validates their interdependence and clarifies the cognitive mechanism through which emotions shape well-being. Additionally, by incorporating gender comparisons, this research contributes new empirical evidence to an underexplored area and helps reconcile inconsistent conclusions regarding gender differences in cognitive flexibility and emotional functioning.

From a practical standpoint, the findings high-light actionable strategies for mental health promotion in university settings. Institutions can design interventions that target both emotion regulation and cognitive adaptability. Cognitive flexibility training—such as guided reappraisal exercises, perspective-shifting tasks, and scenario-based problem solving—can help students learn to reinterpret setbacks and manage uncertainty. Emotion regulation workshops can complement these efforts by fostering awareness of emotional triggers and developing constructive coping strategies. Embedding such programs within counseling services, student development courses, or general education curricula can strengthen resilience and enhance psychological adjustment. Moreover, integrating positive pschology approaches, mindfulness, and peer-support initiatives can cultivate emotional balance and adaptive flexibility, thereby im-proving academic engagement and life satisfaction.

Despite these contributions, several limitations must be acknowledged. First, the cross-sectional design constrains causal inference, as temporal sequencing among emotions, cognition, and mental health could not be verified. Longitudinal or experimental studies are needed to confirm the

directionality of these effects. Second, the sample was limited to students from four universities in Wuhan, restricting generalizability to other regions or cultural contexts. Future studies should include more diverse samples to validate the robustness of the findings. Third, while preliminary analyses indicated that demographic variables such as age, academic year, and socioeconomic background were not significantly correlated with the main variables, future research could further examine their moderating or confounding roles. Fourth, the relatively high correlation between cognitive flexibility and mental health warrants careful interpretation; although conceptually dis-tinct, these constructs share common elements related to adaptive functioning, which may inflate associations. Methodological refinements, including multi-method assessments and time-lagged designs, are recommended to disentangle these relationships.

In conclusion, this study clarifies how positive and negative emotions affect college students' mental health both directly and indirectly through cognitive flexibility. It demonstrates that emotional and cognitive factors operate synergistically to determine psychological well-being and provides new evidence of gender-related patterns in cognitive adaptability. By unifying emotional and cognitive perspectives, the study contributes to a more comprehensive understanding of mental health mechanisms among university students. Practically, the results inform evidence-based interventions and educational policies aimed at fostering emotional stability, flexible thinking, and resilience. Implementing structured programs that cultivate these capacities can support students in navigating academic challenges and life transitions, ultimately enhancing their long-term well-being and social adjustment.

Received: October 18, 2025;
Accepted: October 29, 2025

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