The Effect Of Social Support On The Life Satisfaction Of University Students With Psychological Distress: The Mediating Role Of Emotional Intelligence And Hope

Zhengjie Huang[1,2], Chaithanaskorn Phawitpiriyakliti[1], & Sid Terason[3]

Abstract

This study aimed to explore the influence of social support on life satisfaction among university students in a predetermined province in China, particularly examining the mediating roles of emotional intelligence and hope. A total of 422 university students chosen using multi-stage sampling participated, providing a comprehensive demographic representation including age, gender, and academic background. Utilizing a quantitative design, the study employed validated instruments to measure social support, emotional intelligence, hope, and life satisfaction. Data gathering involved administering structured questionnaires and conducting structural equation modeling, to evaluate the relationships between the key variables. The findings revealed a significant positive correlation between social support and life satisfaction, affirming the hypothesis that emotional intelligence and hope served as critical mediators in this relationship. The study's effect sizes and statistical significance levels underscored the robustness of these findings. In conclusion, the study highlights the importance of social support in enhancing life satisfaction among university students, with the amplifying effect of emotional intelligence and hope. These results suggest practical implications for mental health strategies within educational settings, emphasizing the need for interventions that bolster not only social support networks but also students' emotional intelligence and hope. Such an approach could significantly contribute to improving overall student well-being and satisfaction with life, offering valuable insights for educators, policymakers, and mental health practitioners in developing comprehensive support systems for university students.

Keywords: *social support, life satisfaction, emotional intelligence, psychological distress.*

Introduction

The escalating preval[1]ence of depression and psychological distress among university students in Anhui Province, China, represents a significant concern. As noted by Liu et al. (2021) and Wang et al. (2022), a substantial percentage of these students are experiencing severe psychological crises, including heightened suicidal tendencies. This situation is further aggravated by students' reluctance to disclose their mental health struggles, a phenomenon observed globally but particularly concerning in regions like Anhui, where cultural factors may influence attitudes towards mental health (Deng et al., 2023; Hoffman et al., 2023). Additionally, the response of educational institutions and mental health services in Anhui to these challenges has been found lacking in proactive engagement and support (Kantor et al., 2023; Velez, 2023), highlighting a need for more effective mental health strategies.

[1] College of Innovation and Management, Suan Sunandha Rajabhat University, Thailand.
[2] Mental Health Center, Fuyang Normal University, China.

[3] Faculty of Sports Science, Kasetsart University, Thailand. Corresponding Autho(iD) https://orcid.org/0000-0002-8817-4069

This study aims to address these gaps by exploring the impact of emotional intelligence, social support, and hope on life satisfaction among university students in Anhui. The interplay of these factors is crucial, as emotional intelligence and hope have been shown to significantly mediate the relationship between social support and life satisfaction (Azpiazu et al., 2023; Alorani & Alradaydeh, 2018). For instance, students who receive strong social support may develop higher emotional intelligence, enabling them to better manage stress and anxiety, a concept supported by Holliman et al. (2022). Similarly, Lopez-Zafra et al. (2019) have demonstrated how emotional intelligence enhances the utilization of social support networks, thereby promoting mental well-being.

The choice of Anhui Province as the study's setting is strategic, given its diverse student population and unique socio-cultural context. This specificity allows the research to provide insights that are particularly relevant to this region, potentially informing more culturally-sensitive mental health interventions and educational policies. The study's regional focus is critical, as it considers the specific cultural and societal factors that influence students' experiences and perceptions of social support and mental health, a gap in existing research that has been identified in other regions (Akdeniz & Yayci, 2023; Cui, 2020).

By integrating these factors into a comprehensive model, the study offers a holistic understanding of student mental health within the socio-cultural milieu of Anhui. This approach is innovative, moving beyond the generalizations of previous studies to provide nuanced insights into the cultural-specific manifestations and determinants of student mental health in Anhui.

In conclusion, this study not only corroborates and expands upon existing research findings but also offers a deep dive into the specific cultural context of Anhui Province. Its findings carry significant implications for policy and intervention strategies, aiming to enhance understanding and address regional variances in student mental health.

Theoretical Framework

The crisis of mental health among university students has led to a growing body of research emphasizing the transformative impact of effective social support systems. This research underscores the importance of social environments in shaping student well-being. The positive correlation between social support and life satisfaction, as illustrated by studies like those of Alorani and Alradaydeh (2018) and Azpiazu et al. (2023), forms a foundational aspect of understanding student mental well-being.

Building upon this, the role of emotional intelligence has been increasingly recognized as a mediator in this context, particularly in how it influences the relationship between social support and life satisfaction (Lopez-Zafra et al., 2019; Kong et al., 2019). This factor is critical in understanding how students process and derive benefits from their social networks, contributing significantly to their resilience and coping mechanisms.

Additionally, the construct of hope is highlighted for its significant predictive power in life satisfaction (Akdeniz & Yayci, 2023; Cui, 2020). The inclusion of hope in the study provides crucial insights into the psychological aspects that contribute to a student's ability to thrive in the face of academic and personal challenges.

In response to these findings, practical implications for mental health interventions and policies within educational settings, particularly in Anhui Province, are evident. Educational institutions are advised to foster curricula and environments that nurture not only academic skills but also emotional intelligence and social support networks (Holliman et al., 2022; Lopez-Zafra et al., 2019). Moreover, interventions that focus on enhancing hope and optimism are highlighted as effective strategies for improving mental health outcomes.

Overall, addressing this mental health crisis in university settings necessitates a comprehensive approach that integrates education, resource allocation, collaboration, and societal engagement. This approach is not only crucial for academic performance and student retention but also addresses broader societal concerns, including workforce

readiness, public health, and overall well-being (Velez, 2023; Zhang et al., 2023). This body of research thus provides valuable theoretical insights and practical frameworks for developing empathetic and responsive support systems within educational environments.

Hypothesis Formulation
The relationship between life satisfaction and perceived social support has been a focal point in psychological research (Su et al., 2022), with numerous studies across various demographics underscoring a positive correlation between these two constructs. This body of research illuminates the profound impact that social support—encompassing emotional, informational, and practical assistance from social networks—has on an individual's overall sense of well-being and satisfaction with life.

Alorani and Alradaydeh (2018) and Santos et al. (2023) provide substantial evidence of the positive influence of social support on life satisfaction. Alorani and Alradaydeh (2018) highlights that perceived social support plays in enhancing life satisfaction among young adults, underscoring the importance of nurturing supportive social environments for this demographic. Similarly, Santos et al. (2023) demonstrate that social support is a crucial predictor of life satisfaction in university students, suggesting that the presence of a robust social support network is integral to the psychological well-being of this group.

Further reinforcing these findings, Xin (2023) explores the relationship between social support and subjective well-being among individuals with low socioeconomic status. This study reveals that social support not only boosts life satisfaction but also serves as a buffer against the negative psychological impacts of financial hardship. Additionally, Zhang et al. (2023) delve into the role of social support in mitigating mental health issues like depression and anxiety, particularly among Chinese youths. Their research indicates that social support can moderate the adverse effects of mental health challenges, thereby contributing to greater life satisfaction. Therefore, the first hypothesis is as follows:
H1: Social support can directly affect life satisfaction.

The concept of emotional intelligence, encompassing the ability to recognize, understand, manage, and use emotions effectively, is increasingly recognized as playing a pivotal role in shaping how individuals perceive and process their life experiences, including how they receive and utilize social support. The literature extensively documents the influence of emotional intelligence on various aspects of psychological well-being, particularly life satisfaction. Huebner (2004) provides a comprehensive framework for understanding life satisfaction, defining it as a stable and comprehensive cognitive evaluation of a person's overall living standard. This definition underscores the cognitive aspects of life satisfaction, suggesting that how individuals perceive and interpret their life experiences significantly contributes to their overall sense of well-being (Su et al., 2022). Emotional intelligence is crucial in this context as it directly influences individuals' ability to process and interpret these experiences.

Forste and Moore (2012) also contribute to this understanding by discussing life satisfaction as a cognitive component of well-being, indicating that emotional intelligence, which affects cognitive processes, can play a significant role in determining an individual's overall life satisfaction. Further exploring the relationship between emotional intelligence and life satisfaction, Holliman et al. (2022) demonstrate that emotional intelligence is linked to various aspects of psychological well-being. Their research suggests that individuals with higher emotional intelligence tend to have better coping strategies, more effective social interactions, and a generally more positive outlook on life, all of which contribute to higher life satisfaction. Similarly, Kong et al. (2019) investigate the specific links between emotional intelligence, social support, and life satisfaction. They find that emotional intelligence not only correlates with life satisfaction but also enhances the ability to seek, receive, and benefit from social support, further improving life satisfaction. This leads to the second hypothesis:

H2: Emotional intelligence has a mediating role in the relationship between social support and life satisfaction.

The role of hope in determining life satisfaction, especially in the way individuals envision and pursue their future aspirations, is a subject of significant interest in psychological research (Su et al., 2022). Hope, as conceptualized by psychologists, refers to the cognitive process of setting goals, developing strategies to achieve those goals, and the motivation to pursue them (Snyder et al., 2002). It is not just an emotion but a dynamic cognitive motivational system. Cui (2020) and Lodi et al. (2022) provided substantial evidence of hope's mediating influence on life satisfaction, suggesting that individuals with higher levels of hope are more likely to experience higher life satisfaction.

In view of the multifaceted nature of hope and its relationship with subjective well-being, hope mediates the relationship between gratitude and life satisfaction (Cui, 2020). It was found that the feeling of hopefulness could enhance the positive effects of gratitude on an individual's overall satisfaction with life. Similarly, Lodi et al. (2022) explored the role of hope in relation to other psychological constructs, emphasizing its mediating role in the relationship between optimism and various indices of well-being, including life satisfaction. These findings resonate with the broader psychological literature, which has consistently highlighted the importance of hope in promoting psychological well-being and resilience (Snyder, 2002).

The relationship between social support and life satisfaction is also significantly influenced by the presence of hope. Social support, whether from family, friends, or significant others, provides an external resource that individuals can draw upon during challenging times (Diener et al., 1985). When individuals perceive high levels of social support, they are more likely to feel hopeful about overcoming difficulties and achieving their goals. This positive outlook, in turn, contributes to greater life satisfaction. As such, hope can be seen as a critical mediator that transforms the benefits of social support into increased life satisfaction. This forms the basis for the third hypothesis:

H3: Hope has a mediating role in the relationship between social support and life satisfaction.

The intricate relationship between emotional intelligence, hope, and life satisfaction has been the subject of extensive research, yielding valuable insights into the interplay of these psychological constructs. Notably, studies such as those conducted by Akdeniz and Yayci (2023) and Alorani et al. (2017) have significantly contributed to our understanding of how these factors interact and influence each other. Their findings suggest a complex yet coherent framework where both emotional intelligence and hope appear to function not just independently but in conjunction to mediate the effects of social support on life satisfaction.

Emotional intelligence, as a facet of an individual's ability to perceive, understand, manage, and use emotions effectively, plays a pivotal role in how one processes and responds to social support. It enables individuals to decipher emotional cues and utilize this understanding to foster more meaningful and supportive relationships, thereby enhancing their overall life satisfaction.

In this context, emotional intelligence acts as a conduit through which the benefits of social support are realized and internalized. Similarly, hope, characterized by an individual's expectancy for positive outcomes and the motivation to pursue goals, is instrumental in shaping one's perspective towards life's challenges and opportunities. It empowers individuals to maintain a positive outlook and resilience, particularly in the face of adversity. This optimistic and forward-looking approach is vital in leveraging social support to improve life satisfaction.

When these two constructs–emotional intelligence and hope–are combined, they create a synergistic effect that amplifies the positive impact of social support on life satisfaction. Emotional intelligence enhances the ability to utilize social support effectively,

while hope provides the optimism and motivation needed to translate this support into tangible improvements in life satisfaction. This leads to the final hypothesis:

H4: Emotional intelligence and hope have a mediating role in the relationship between social support and life satisfaction.

Method

Participants

This study was conducted on university students with psychological distress in undergraduate universities in Anhui Province. The quantitative questionnaire was distributed online to the students concerned in a peer-to-peer manner through a specialized working channel. Data collection in this study was conducted through an online survey, a method selected for its effectiveness in reaching a broad demographic and its convenience for participants, as noted by Ball (2019). The use of an online platform facilitated accessibility for students across diverse departments and academic levels within the universities. This digital approach aligns well with the tech-savvy nature of the university student population and their frequent online presence. The distribution of the survey link was carried out through various channels, including university email systems, social media platforms, and academic networking forums, allowing students to participate at their own convenience and submit responses electronically. The data collection strategy also included the implementation of reminders and follow-ups to enhance response rates.

A multi-stage sampling techniques was implemented. Initially, universities in Anhui Province, China were selected based on predetermined criteria, including size and diversity of the student population. Within these universities, departments were randomly chosen, and then classes within these departments were randomly selected to obtain a representative sample of the student population. Out of the initial group of 456 students who were approached to participate in the online survey, 422 provided valid responses, yielding a high participation rate of 92.54%. This rate suggests a strong interest and willingness among the targeted demographic to engage in the study. There was an element of self-selection, as participation in the survey was voluntary. Students who chose to participate might have had a particular interest in or experience with the study's focus on psychological distress and life satisfaction. The sample size of 422, while slightly lower than intended, still provides a substantial dataset for robust statistical analysis. The precision of parameter estimates would be influenced by this sample size, with the larger sample allowing for more precise and reliable estimates of the relationships between social support, emotional intelligence, hope, and life satisfaction.

As in Table 1, the participants, predominantly aged between 18 to 24 years with a mean age of 19.84, were mainly female students, comprising 71.6% of the sample, while male students made up 28.4%. Academically, the sample included students from various fields such as science & technology, culture & management, and educational & arts, and spanned different academic years, with sophomores and juniors forming the majority. Socioeconomically, the students came from a range of backgrounds, with household monthly incomes varying from below 1000 RMB to over 5001 RMB.

Table 1 Participant Profile

Characteristics	n	%
Gender		
Male	120	28.4
Female	302	71.6
Age		
18–20	303	71.8
21–22	110	26.1

23–24	9	2.1
Class		
First-year	83	19.7
Sophomore	117	27.7
Junior	185	43.8
Senior	37	8.8
Field of Study		
Science & Technology	114	26.4
Culture & Management	153	36.2
Educational & Arts	155	36.4
Household Monthly Income (RMB)		
Lower than 1000	47	11.1
1001–2000	84	19.9
2001–3000	96	22.8
3001–4000	82	19.4
4001–5000	55	13.0
5001 or above	58	13.8

A power analysis is typically conducted during the study design phase to determine the minimum sample size required to detect an effect of a given size with a specified level of confidence. For this study, details on the specific parameters used in the power analysis (such as effect size, alpha level, and power) are not provided, but it can be assumed that such an analysis informed the initial target of 456 participants.

In summary, while the achieved sample size was slightly lower than the intended size, the study still maintained a strong participant base, allowing for statistically significant and precise findings. The initial sample size calculation, likely influenced by a power analysis, reflects the study's commitment to methodological rigor and ensuring the reliability of its conclusions.

Instrument

Given the local context of the study, survey instruments were meticulously adapted and translated, maintaining the integrity of the original scales, a process underscored by Harkness et al. (2004). A preliminary pilot test with a subset of students was conducted to refine the survey, assess the clarity of questions, ensure user-friendliness, and evaluate the reliability and validity of the translated instruments (Clark & Watson, 2019). At first, in order to evaluate the content validity of the assessment tool, a pilot test was carried out with the participation of 45 university students. The assessment of content validity indices, including I-CVI, S-CVI/UA, and S-CVI/Ave, derived from their responses, initially offered insights into the appropriateness of the evaluation (Polit & Beck, 2009). Calculating content validity quantitatively, using content validity index, is a widely employed method (Rodrigues et al., 2017). These expert insights led to significant improvements in the questionnaire's clarity and accuracy.

The University Students' Social Support and Life Satisfaction Scale (USSLSS) evaluates the perception of social support and its impact on life satisfaction among university students. It consists of 92 items, distributed across four subscales. The first subscale, comprising 17 items, assesses the level of social support students perceive from family, friends, and university staff. It utilizes a Likert scale (1 = strongly disagree to 5 = strongly agree), with sample items like "I receive adequate support from my family when I was in trouble." The second subscale, with 16 items, measures emotional intelligence aspects such as self-awareness and empathy. Example items include "I can easily understand my classmates' feelings" and "I manage my emotions effectively in stressful situations." The third subscale assesses hope and future orientation through 23 items, such as "I feel hopeful about my future career prospects." answered on the same 5-point format. The fourth subscale assesses life satisfaction through 36 items, such as "My life at

university was interesting.." answered on the same 5-point scale. The USSLSS demonstrated strong internal consistency with coefficients for the total instrument ($\alpha = .89$, $\omega = .91$), and for the factors social support ($\alpha = .85$, $\omega = .87$), emotional intelligence ($\alpha = .86$, $\omega = .88$), and hope ($\alpha = .87$, $\omega = .89$). The scale's model fit indices in this study were satisfactory, with RMSEA = .06, CFI = .94, and TLI = .93, indicating a robust measure for assessing key factors influencing life satisfaction among university students. The scale indicated content validity ranging from moderate to high for individual items (I-CVI = .60–.95) and strong content validity for the entire questionnaire (S-CVI/UA = .75; S-CVI/Ave = .92).

The Social Support Scale for University Students (SSSUS: Ye, 2008) was designed to measure the level of perceived social support among university students. It consists of 17 items divided into three main subscales: subjective support (SJS), objective support (OJS), and support utilization (SPU). The first subscale consists of five items assessing the support received from university staff, with sample items including "Receiving support and help from school staff on a regular basis." The second subscale consists of 6 items assessing the support received from family and friends, with sample items include "Family and friends are always there for me when needed." The third subscale consists of six items assessing how and to what extent college students actively seek support from those around them, with sample items including "I usually take the initiative to seek help from others when I am in trouble", with responses on a Likert scale (1 = never to 5 = always). The SSRSUS demonstrated strong internal consistency, with coefficients for the overall instrument ($\alpha = .907$) and for the subscales: support from family and friends ($\alpha = .89$) and quality of social interactions ($\alpha = .88$). The scale's model fit indices in this study indicated good construct validity, with RMSEA = .06, CFI = .91, and TLI = .90. This scale provides a comprehensive assessment of the social support systems that are crucial to university students' well-being and academic success. In terms of content validity, the scale displayed substantial results for individual items (I-CVI = .55–.98) and high overall content validity for the questionnaire (S-CVI/UA = .72; S-CVI/Ave = .94).

The Emotional Intelligence Scale (EIS; Law et al., 2004) assesses the emotional intelligence of university students, including the dimensions of evaluation and expression ability of self-emotions (EEAS), ability to recognize and evaluate others' emotions (AREO), self-emotional management ability (SEMA), and emotional application (EAPA) dimensions. These dimensions are based on Mayer and Salovey's (1995) conceptualization of emotional intelligence, answered on a Likert scale (1 = strongly disagree to 5 = strongly agree). The EEAS subscale contains items on how university students assess and express their own emotions, such as "I can tell the reasons why I feel certain feelings", and the last subscale assesses the ability to self-emotional application, such as "I often tell myself that I feel certain emotions.", such as "I often tell myself that I am a capable person." The EIS demonstrated high internal consistency in this study, ensuring its reliability in measuring emotional intelligence among university students ($\alpha = .90$). This high level of consistency across its subscales confirms the EIS's efficacy in capturing the multifaceted nature of emotional intelligence, making it an essential tool for understanding the emotional capabilities that are crucial for students' academic and personal success. The fit indices of the scale model in this research were RMSEA = .06; CFI = .91 and TLI = .90, indicating its robustness in assessing emotional intelligence dimensions in a university context. The individual items within the scale exhibited varying levels of content validity (I-CVI range: .45 to .90), with the overall content validity of the questionnaire rated as strong (S-CVI/UA = .68; S-CVI/Ave = .93).

The Hope Scale (HS; Schrank et al., 2011) measures the construct of hope in university students, synthesizing elements from Miller Hope Scale, Hessian Hope Index, and Snyder Hope Scale. The HS is structured into several items, divided into distinct subscales that capture various aspects of hope. Responses for the HS are recorded on a Likert scale (1 = never to 5 = always), providing a nuanced assessment of hope levels among students. The items are carefully designed to reflect different dimensions of hope,

such as future orientation, goal-setting, and motivation. The HS has demonstrated notable stability in its factor structure, ensuring that it accurately captures the multifaceted nature of hope. The scale has shown high internal consistency in this study ($\alpha = .92$). The subscales also exhibit strong internal consistency, ($\alpha = .80–.85$), confirming the scale's effectiveness in assessing various components of hope. The integration of components from established hope scales into the HS allows for a comprehensive evaluation of this vital psychological construct. The high internal consistency and stable factor structure of the HS make it an invaluable tool in understanding the role of hope in the well-being and academic success of university students and their psychological resilience and future-oriented thinking. Regarding content validity, the scale displayed diverse content validity scores for its individual items (I-CVI = .58–.92) and a high content validity score for the questionnaire as a whole (S-CVI/UA = .79; S-CVI/Ave = .96).

The Student Life Satisfaction Scale (SLSS; Zhang et al., 2004) assesses life satisfaction among students, adapted from Huebner's (1991) and Huebner et al.'s (2022) Multidimensional Life Satisfaction Scale for Adolescents (MLSS). The SLSS is a robust tool consisting of a series of items designed to gauge various dimensions of life satisfaction as experienced by students. Utilizing a Likert scale (1 = strongly disagree to 5 = strongly agree), the SLSS enables students to rate their satisfaction across different aspects of their lives. The scale's items are crafted to reflect the multifaceted nature of life satisfaction, encompassing academic, social, emotional, and personal domains. In this study, the SLSS exhibited high internal consistency ($\alpha = .71–.91$). Such a range of alpha values underscores the scale's versatility in accurately capturing the different facets of life satisfaction among students. Additionally, the SLSS demonstrated a high Kaiser-Meyer-Olkin (KMO) value of .942, further affirming its effectiveness as a comprehensive instrument for assessing student life satisfaction. The adaptation of the SLSS for use in a Chinese context, while retaining the core components of Huebner's original scale, allows for a culturally relevant assessment of life satisfaction among students. Its high internal consistency and KMO value make the SLSS an invaluable tool for researchers and educators seeking to understand and enhance the overall well-being and satisfaction of students in educational settings. Varying levels of content validity were observed at the item level, with individual items scoring between .50 and .85 on the I-CVI, while the overall content validity of the questionnaire was rated as strong (S-CVI/UA = .73; S-CVI/Ave = .91).

Ethical Concern

In this study, stringent adherence to ethical guidelines was paramount, with a thorough process established to ensure informed consent from all participants. This involved participants fully understanding the study's objectives, acknowledging the voluntary nature of their participation, and receiving assurance about the confidentiality and anonymity of their responses. Ethical approval for the study was likely secured from an Institutional Review Board (IRB), reinforcing the commitment to ethical standards and the protection of participants' rights. Recognizing the sensitive nature of mental health data, the study implemented rigorous privacy and confidentiality measures, with a secure handling and storage of data. Moreover, considering the potential impact on participants, the study likely provided resources or referrals for mental health support as needed. These comprehensive ethical procedures not only emphasized the importance of voluntary participation and safeguarded participant well-being but also reinforced the rigorous methodology of the study, ensuring the validity and reliability of its findings.

Statistical Analysis

This research predominantly focused on examining the relationships between social support and life satisfaction, with particular emphasis on the potential mediating roles of emotional intelligence and hope. The hypothesized model was rigorously tested using covariance-based structural equation modeling (SEM). To ascertain the mediation effects, a comprehensive statistical regression mediation analysis was employed, utilizing the IBM

SPSS Amos 26 (Arbuckle, 2019). The primary objective of the study was to methodically explore the mediating role of emotional intelligence and hope within the context of university students who were experiencing psychological distress. This exploration was grounded in quantitative research methods (Bloomfield & Fisher, 2019), with the variables of interest being systematically integrated into the hypothesized model.

The mediation analysis was conducted in two distinct phases. Initially, the measurement model was subjected to a first-order factor analysis. This phase was critical in evaluating the structural integrity and validity of the model, ensuring that it accurately represented the constructs under investigation. Following the initial phase, the structural model was thoroughly analyzed. This phase involved an in-depth examination of the relationships between the variables, specifically focusing on the mediating roles of emotional intelligence and hope. By employing these robust statistical techniques, the study sought to provide a nuanced understanding of the complex dynamics between social support, emotional intelligence, hope, and life satisfaction among university students facing psychological challenges. The findings are expected to contribute significantly to the existing body of knowledge in this field and offer valuable insights for future research and practical applications.

Results

In terms of construct reliability (CR), the results were favorable. The CR coefficients, as detailed in Table 2, consistently exceeded the threshold of .7 (Hair et al., 2009). This indicates that the measures employed in the study demonstrated adequate internal consistency, a crucial aspect of reliable research instruments. The alpha coefficient (α), another critical indicator of reliability, was found to be greater than .9. This high level of α coefficient further substantiates the reliability of the measures used.

Additionally, the maximum shared variance (MSV) values were all observed to be lower than the average variance extracted (AVE) values. This discrepancy is a positive indicator, signifying the absence of reliability issues within the measures. Such a result is essential in ensuring that the scale accurately reflects the constructs it intends to measure without undue overlap.

Lastly, the study's convergent validity was supported by the high CR obtained. This aspect of validity assesses the degree to which variables measuring the same construct are correlated. The strong correlation among these variables, indicated by the high CR, suggests that the measures consistently and reliably represent the same construct. This finding confirms the acceptable validity of the scale used in the study.

In summary, the results demonstrate that the measures employed in the study are both valid and reliable, suggesting that the findings based on these measures are likely to be robust and trustworthy. The thorough approach to testing and refining the measures underscores the study's commitment to methodological rigor.

Figure 1 Measurement Model
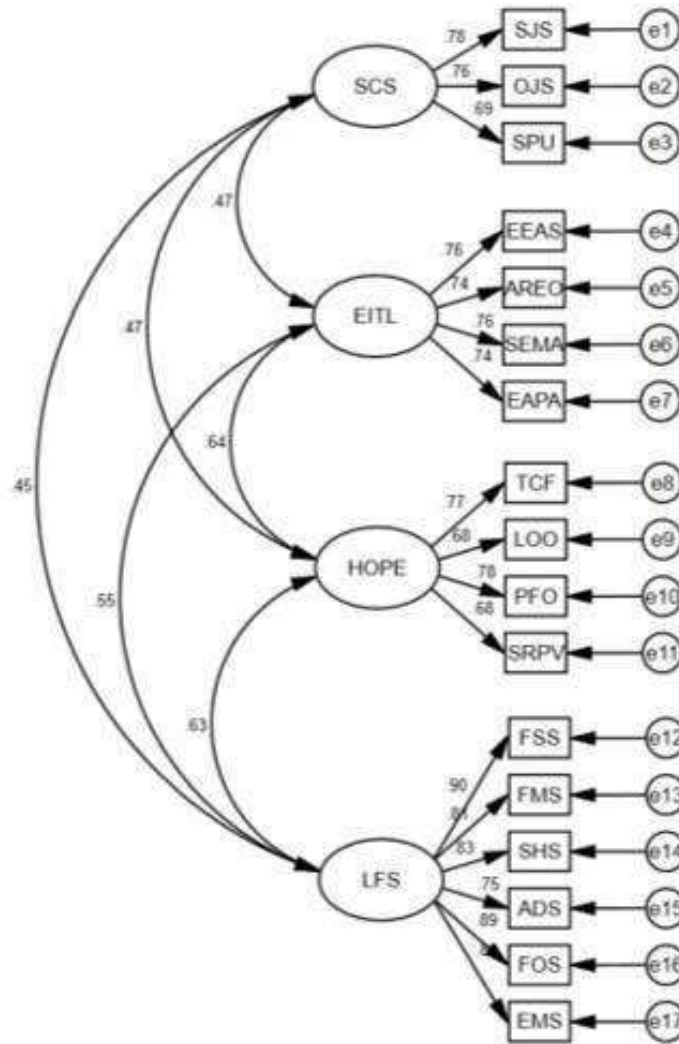
Note. SJS = subjective support, OJS = objective support, SPU = support utilization, SCS = social support, EEAS = evaluation and expression ability of self-emotions, AREO = ability to recognize and evaluate others' emotions, SEMA = self-emotional management ability, EAPA = emotional application. EITL = emotional intelligence, TCF = trust and confidence, LOO = lack of foresight, PFO = positive future orientation, SRPV = social relations and personal value, LFS = life satisfaction, FSS = friendship satisfaction, FMS = family satisfaction, SHS = school satisfaction, ADS = academic satisfaction, FOS = freedom of satisfaction, EMS = environmental satisfaction.

To ascertain discriminant validity, the study compared average variance extracted (AVE) and squared correlation coefficients for measures assessing different constructs. The AVE values for all constructs ranged from .55 to .71. In Table 2, AVE estimates surpass .5, CR coefficients exceed .7. The MSV values are all lower than AVE. Additionally, model fit indices, including χ^2 = 219.07, df = 113, p < .001, GFI = .97, IFI = .98, TLI = .97, CFI = .97, and RMSEA = .04, further validate the scale's robustness.

Table 2 Construct Reliability, Average Variance Extracted, Maximum Shared Variance and Alpha Coefficients

Variable	CR	AVE	MSV	α
SCS	.789	.556	.222	.975

EITL	.836	.561	.404	.962
HOPE	.819	.532	.404	.938
LFS	.938	.718	.394	.969

Note. CR = construct reliability; AVE = average variance extracted; MSV = maximum shared variance; α = internal consistency reliability.

In general, the model developed in this study proves well-suited for further examination, as evidenced by its favorable goodness of fit, composite reliability, and construct validity. To uphold the assumptions of maximum likelihood estimation, which presumes multivariate normality, an assessment of univariate distributions was conducted to evaluate normality. The results indicated no deviations from normality, with the skewness index below .3 and the kurtosis index staying below 1.

Before initiating the mediation analysis, the researcher diligently reassessed the hypothesized conditions through multiple regression analysis. The outcome demonstrated conformity with the expected conditions, revealing a multiple linear regression relationship among social support, emotional intelligence, hope, and life satisfaction, adhering to the correct causal order between these variables. Importantly, all data were gathered concurrently, and no evidence of reverse causality was identified.

As shown in Table 3, which mainly demonstrates the correlation coefficients, means and standard deviations between the variables, the correlations between the four variables are all significant and are all moderately strong correlations, with coefficients of .4 and above, ranging from .469 to .636, with the highest correlation matrix of social support and emotional intelligence being strong correlations (r = .636), with a variable means of 3.35–3.53 and standard deviations in the range of .69–.84.

Table 3 Mean, Standard Deviation, and Correlation

Construct	M	SD	1	2	3	4
1. SCS	3.39	0.71	–			
2. EITL	3.35	0.74	.469	–		
3. HOPE	3.41	0.69	.471	.636	–	
4. LFS	3.53	0.84	.455	.547	.628	–

Note. SCS = social support; EITL = emotional intelligence; LFS = life satisfaction. All correlation coefficients are significant at p < .001.

Figure 2 presents the analytical outcomes for the Chain Intermediary model. The model was subjected to testing, evaluating the direct impact of the predictor variable (social support) on the outcome variable (life satisfaction). Simultaneously, it assessed the direct effects on the mediators (emotional intelligence and hope) and the effects of the mediators on the outcome variable. In the structural equation modeling of life satisfaction among psychologically disturbed students, the model fitting results revealed favorable indices: χ^2 = 219.07, df = 113, p < .001, GFI = .97, IFI = .98, TLI = .97, CFI = .97, and RMSEA = .054, indicating a well-fitted set of equations.

In Table 4, all hypotheses were substantiated. Significant direct relationships were confirmed, and the mediation paths were proved to be significant. The predictive impact of social support on emotional intelligence was found to be significant (β = .486, p < .001), as was the predictive effect of emotional intelligence on hope (β = .493, p < .001). Moreover, the predictive effect of social support on hope demonstrated significance (β = .213, p < .001), while the predictive effect of hope on life satisfaction was also found to be significant (β = .529, p < .001). Additionally, the predictive effect of social support on life satisfaction reached significance (β = .193, p = .004), and the predictive effect of emotional

intelligence on life satisfaction was likewise significant (β = .235, p = .002).

Both Figure 2 and Table 4 provide a comprehensive schematic representation of the entire path structure for the models, presenting the respective β coefficients. The findings reveal that the pathways from social support to mediators (emotional intelligence, hope) and from mediators to life satisfaction align closely with the initially hypothesized relationships. Essentially, there is compelling evidence suggesting that emotional intelligence and hope predominantly to act as mediators—enhanced social support correlates with elevated emotional intelligence and hope, subsequently contributing to heightened life satisfaction.

Figure 2 Structural Equation Model
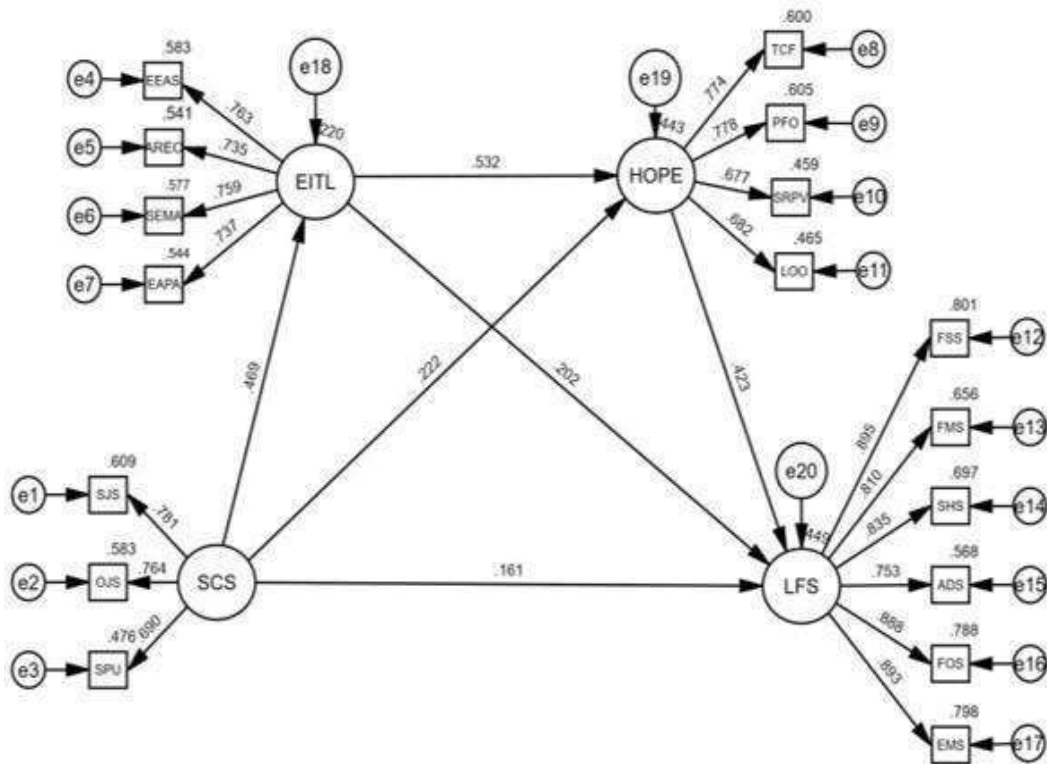
Table 4 Direct Effects

Path	β	SE	CR	p
SCS → EITL	.486	.065	7.515	< .001
EITL → HOPE	.493	.061	8.108	< .001
SCS → HOPE	.213	.058	3.642	< .001
HOPE → LFS	.529	.085	6.196	< .001
SCS → LFS	.193	.067	2.891	.004
EITL → LFS	.235	.076	3.096	.002

Note. SE = standard error; CR = composite reliabiltiy.

By scrutinizing the estimated indirect effects, it is evident that emotional intelligence and hope emerge as credible mediators. This is supported by the values in Table 5, which show that the confidence intervals for both the upper and lower bounds do not include 0 and the p-values are below .05. Moreover, the observation that social support exerts its influence on life satisfaction through the intermediary roles of emotional intelligence and hope lends support to the existence of partial mediation in the model.

Table 5 Mediation Effects

Effect	β	Bootstrap		p
		Lower	Upper	
SCS → EITL → LFS	.114	.015	.228	.027
SCS → HOPE → LFS	.113	.023	.273	.006
SCS → EITL → HOPE → LFS	.127	.064	.243	.001
SCS → LFS	.193	.244	.372	.016
Total Effect	.546	.579	.751	.001

Discussion

The findings of this research elucidate a significant positive correlation between life satisfaction and social support among university students, echoing the results of previous studies in this domain such as Azpiazu et al. (2023), Boylan et al. (2022), and Hidalgo-Fuentes et al. (2022). The study further reveals that both social support and emotional intelligence are predictive of life satisfaction, aligning with the theoretical frameworks proposed by Margaretha et al. (2023) and Mayer & Salovey (1995). Notably, emotional intelligence and hope emerge as mediating factors between social support and life satisfaction (Huebner, 1991; Huebner, 2004). This suggests that university students with higher emotional intelligence, when provided with adequate social support, are more adept at comprehending and managing their emotions and those of others, thereby effectively mitigating the psychological distress they experience.

The study supports the hypothesis that emotional intelligence mediates the relationship between social support and life satisfaction, a finding that is consistent with Lopez-Zafra et al. (2019) and Kornas-Biela et al. (2023). However, Kong et al. (2019) propose that social support might also function as a mediator between emotional intelligence and life satisfaction, indicating a potential bidirectional relationship under certain conditions. Furthermore, the study underscores the comprehensive nature of social support, encompassing assistance from family, educational institutions, society, and peer. This comprehensive support is instrumental in enhancing the emotional intelligence and hope of university students, thereby fostering a positive psychological state and augmenting life satisfaction. This study corroborates the idea that a mutually reinforcing relationship exists between emotional intelligence and social support (Xin, 2023; Ye & Dai, 2008), which, in turn, elevates hope and life satisfaction among students.

From a practical perspective, this study underscores the importance of integrating emotional intelligence into strategies aimed at improving life satisfaction (Lopez-Zafra et al., 2019; Mayer & Slovey, 1995), especially for university students experiencing psychological distress. It advocates for increased attention from families and educational institutions towards students facing psychological challenges. By fostering a supportive and positive mental health environment, and through targeted interventions tailored to different demographics, universities can significantly enhance the emotional intelligence and life satisfaction of their students.

Moreover, the study reveals gender-based differences in the utilization of social support and emotional management, aligning with findings from Fredrick et al. (2018). These differences highlight the necessity of nuanced approaches in providing psychological support, considering the distinct needs and tendencies of various student groups. By employing emotional intelligence as a mediator, the study offers a novel perspective in examining the influence of social support on life satisfaction among university students facing psychological distress. This approach enriches the existing body of knowledge regarding the factors influencing life satisfaction and the mechanisms through which these influences operate.

Implications for Future Research

The reliance on self-reported data also introduces potential biases, and the lack of differentiation among various categories of psychological distress calls for further research for more comprehensive understanding. This study was conducted with university students in Anhui Province, China, and the representativeness of the subjects still needs to be optimized. It is recommended that future researchers expand the collection area of the study sample to improve the generalizability of the findings.

This study explored the effects of social support on life satisfaction using the variables of emotional intelligence and hope as mediators, and it is suggested that future research could include psychological variables such as personality traits and self-efficacy as part of the factors on the effects of subjective well-being. Adolescent mental health problems have complex classifications and manifestations, and common manifestations include anxiety, depression, bi-directional affective disorder, and post-stress disorder, etc. It is suggested that future research can categorize and analyze the external manifestations of specific psychological behaviors to form targeted conclusions for use in research and practice by those in need.

At present, the incidence of psychological problems among Chinese primary and secondary school students continues to increase (Zeng et al., 2016). It is recommended that more attention be paid to the study of adolescent mental health problems in primary and secondary schools, so that the growth process of adolescents with psychological disturbances can be analyzed comprehensively and in depth in terms of family education, school education, and the influence of the social environment, and more scientific and objective conclusions can be formed. The analysis results of this study found that the incidence of psychological distress among female college students is higher than that of male students, and it is suggested that future studies pay more attention to the causes and countermeasures of psychological distress problems among female college students. The second and third years are the period of high incidence of psychological problems among college students, and it is suggested that future research should pay more attention to the causes of psychological problems among college students in this period.

Implications for Policy

The observed prevalence of psychological distress among university students, as highlighted by this study, underscores a critical need for comprehensive policy interventions. These interventions should address the gaps in support from families, educational institutions, and society at large. In addition to the recommendation for government departments to enact laws and policies that emphasize the importance of mental health care, there is a need for a multi-faceted approach to effectively tackle this issue.

Firstly, policy initiatives should include the development of robust mental health education programs in schools and universities. These programs should aim to increase awareness about mental health issues, reduce stigma, and provide students with practical skills to manage stress and emotional challenges. Incorporating mental health education into the curriculum can foster a more informed and empathetic school environment. Secondly, there should be a greater investment in mental health resources within educational institutions. This can include increasing the availability of trained mental health professionals, such as counselors and therapists, and ensuring that students have easy and confidential access to these services. Regular mental health screenings can be implemented as part of university health services to identify and assist students who may be at risk of psychological distress.

Additionally, policies should encourage collaboration between educational institutions and mental health organizations to create comprehensive support systems for students. This can involve partnerships with local mental health clinics, teletherapy services, and peer-support programs. Such collaborations can provide a wider range of resources and support options for students. Furthermore, there should be a focus on training educators and university staff to recognize signs of psychological distress in students and

provide appropriate support or referrals. This training should be part of the professional development programs for educators and should be regularly updated to reflect the latest research and best practices in mental health. At a societal level, policies should aim to create a culture that prioritizes mental well-being. This can involve public awareness campaigns, community-based mental health initiatives, and support for families in understanding and addressing the mental health needs of young adults.

In conclusion, addressing the mental health crisis among university students requires a holistic policy approach that integrates education, resource allocation, collaboration, training, and societal engagement. Such a comprehensive strategy can significantly contribute to creating a supportive and nurturing environment for the psychological health and growth of university students.

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