The Emotional Intelligence's Influences on Self-efficacy and Subjective Well-Being of Taiyuan College Students, Shanxi Province, China

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Abstract

At present, college students often encounter a lot of emotional distress, such as anxiety, depression, and other bad emotions, which directly affect students' mental health, and thus affect their cognition and experience of subjective well-being. The research objective is to examine the relationship of emotional intelligence, self-efficacy, and subjective well-being of college students. The research population was the students of colleges and universities in Shanxi Province, China. The samples are 409 college students from the North University of China, Taiyuan University of Science and Technology, and Taiyuan Institute of Technology. Through literature review, combined with emotional intelligence and emotional affect theory, self-efficacy theory, and subjective well-being theory, a structural equation model of the impact of emotional intelligence on subjective well-being is proposed. The data analysis results show that emotional intelligence positively impacts subjective well- being, and self-efficacy partially mediates between emotional management and subjective well-being. Strategies to improve college students' emotional intelligence proposed from the three aspects of society, university, and individual help college students enhance their ability to understand their own emotions and others' emotions, improve their emotional intelligence to control their own emotions, and successfully cope with and solve various emotional issues in their subjective well-being. We provide these resources to improve subjective well-being, which may help colleges and universities design targeted interventions to promote college students' subjective well-being.

Keywords: College Student, Emotional Intelligence, Self-efficacy, Subjective Well-being

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1. Introduction

The stage of college is an important period of young people's mental maturity, and it is also a period of varied and relative instability. With the improvement of social status, knowledge literacy, and the influence of certain age stages, the emotion of college students has distinct characteristics. According to the psychologist Hall, youth is in the filtering period from the "ignorant age" to the "civilized age", which is characterized by shaking and ups and downs. He calls this period "the stormy period". With the improvement of their knowledge level and cognitive ability, college students can control their emotions. However, due to their wide interests and sensitivity to external things, as well as their youthful arrogance and conformity mentality, their emotions are easily stimulated in many cases, just like the reckless storm with great impulsiveness.

The causes of college students' suicides are extremely complex and are the result of the interaction of personal factors, family conditions, social factors, and other internal and external factors (Peng Jinxian,2019). In 2016, suicide is the second leading cause of death in the 15-29 age group (World Health Organization WHO (2017). The detection rate of depressive symptoms among Chinese college students is 23.8%, and depression is the leading cause of college students' suicide (LEI X Y,XIAO LM, LIU Y N, et al., 2016). The study found that the suicide plan detection rate of college students in mainland China was 5.4% for male students and 4.2% for female students (Ru Fuxia, Huang XiuPing, et al., 2019). The proportion of students with suicidal ideation is 16.39%, among which 15.82% think so only occasionally, while the remaining 0.57% often think about suicide (CHISHOLM D, SWEENY K, SHEEHAN P, et al., 2016). With the increasingly serious psychological problems of college students in China, the mental health education of college students has attracted extensive attention.

Emotion is a kind of complex psychological activity that people produce in daily life, which is a general term for a series of subjective cognitive feelings, which is the state of mind and physiology of various sensory experiences, thoughts, and behaviors. It affects the cognition of things, the judgment of the event, the shaping of personality, the development of the self, and the physical and mental health of the person, and the positive and negative points of emotion are the direct driving force that affects

the reaction of individual behavior. Emotional management refers to the ability of individuals to consciously perceive emotions, rationally recognize and identify emotions, scientifically control and regulate emotions, and thus facilitate the harmonious interaction between individuals and the social environment. At the same time, we try to find the balance of psychology in our own coordination, so that individuals can maintain a positive emotional state, effectively relieve the mental trouble of negative emotions, and continuously develop the process of self-control of emotion and the ability to respond to the emotions of others around us.

Recent studies show that mood management has an influence on anxiety, depression, and ion and sleep disorders in patients with cerebral infarction (Wang, 2020). Yi Yuhao, Jia Yan, Liu C ,hang and Li Xiuyan union that physical exercise has a good role in promoting college students' mental health, especially with the increase of physical exercise, the degree of college students' mental health increases. Peng Liping (2022) studied that self-efficacy affects college students' subjective well-being.

Emotional intelligence, referred to as EQ, refers to the ability of individuals to monitor their own and others' emotions and to recognize and guide their ought's and behaviors (Golemen, 1995). "Emotional intelligence is of great significance in maintaining mental health, especially in promoting social progress (Davis et al., 2019). Research shows that emotional management ability can be measured by emotional intelligence. Emotional intelligence is significantly positively correlated with life satisfaction and job satisfaction, and independently predicts individual subjective well-being (Wang & He, 2013). College students will face many major problems during their college life. If college students have good emotional management abilities will better adapt to society.

Subjective well-being includes all kinds of positive and negative evaluations of people's lives and their emotional reactions to their experiences. (Diener & Shigehiro, 1997). Subjective well-being mainly refers to the overall evaluation of people's emotional and cognitive quality of life. It is an important comprehensive psychological indicator to evaluate the quality of personal and social life, and one of the key reference indicators to reflect the healthy and growth of young people's psychology (Khaptsova & Schwartz, 2016).

College students are in their youth and will soon become the main force in all walks of life. To expand the enrollment of colleges and universities in China, so that more students have the opportunity to enter the university for further study. With the gradual development of universities, there are various problems. More and more college students have psychological problems because they can't deal with interpersonal relationships correctly and have too much employment pressure, which leads to the idea of suicide. At present, college students commit suicide frequently. Some data show that in recent years, the phenomenon of adolescent suicide is on the rise, and has become the first cause of youth death in China, College Students' suicide has caused people's attention. College students' suicide has brought a devastating blow to families, especially families with only one child, leaving an indelible psychological shadow for their peers and bringing negative effects to schools and society. All the phenomena make people must think about the causes of College Students' suicide to avoid more tragedies.

In 2020, after the novel coronavirus epidemic has passed, college students returned to campus. There are more than 30 suicides. Paying attention to mental health makes the tragedy never happen again. What are the reasons behind the suicide of college students? This is because the long-term accumulation of negative emotions leads to the result. If college students can timely and properly deal with negative emotions, such incidents can also be avoided. Therefore, it mainly comes from three aspects: College Students' awareness of emotional management is indifferent, college students' goal of subjective well-being is not clear, and college students' ability of self-efficacy is insufficient. If the perspective is transferred to the university campus, it is not difficult to find that there are also adverse consequences caused by emotional control among college students. This study mainly analyzes the following three aspects.

College students are the main force in building a socialist country with Chinese characteristics. Paying attention to the subjective well-being of college students is related to the fate of the country (Jiang, 2021). Therefore, the research group is college students in Taiyuan, Shanxi Province, China. In this study, the authors intended to examine the relationship among college student's emotional intelligence, self-efficacy, and subjective well-being. The research objective is to examine the relationship between emotional intelligence, self-efficacy, and subjective well-being of college students.

2. Literature Review

Emotional intelligence is divided into four dimensions: emotional monitoring, emotional application, evaluation of others' emotions, and social ability.

According to social cognitive theory, self-perception and self-regulation play a very important role in the development of self-efficacy (Bandura, 2003), and emotional intelligence is related to the perception and regulation of individual emotions, so it may promote the improvement of self-efficacy.

In this study, the relationship between emotional intelligence, self-efficiency, and well-being is shown in Figure 1. There are three hypotheses in this study, which are as follows:

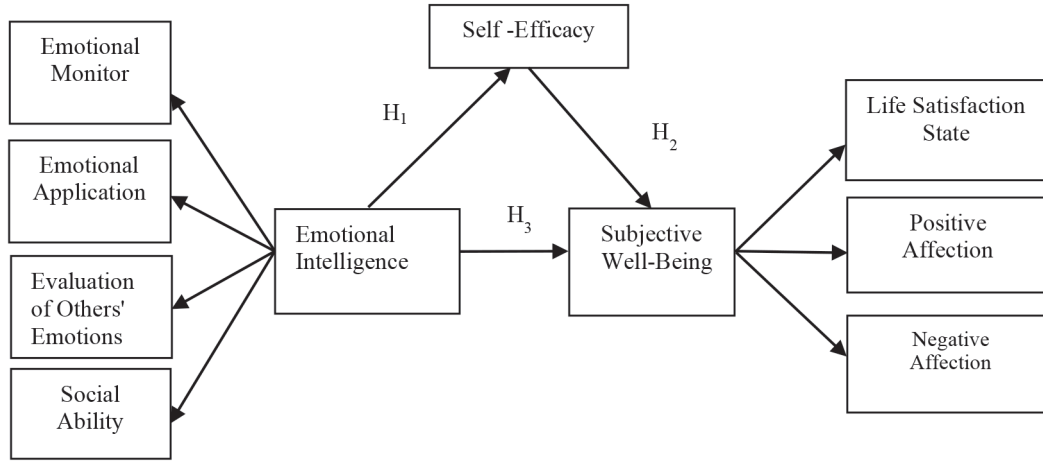

Figure 1 *Conceptual Framework*

Issah, M. presents the role of emotional intelligence in leading change in an organization. Specifically, the article highlights the different perspectives on emotional intelligence, and the related five components self-awareness, self-regulation, self-motivation, empathy, and social skill (Issah, M.,2018). Although numerous studies have examined the role of helicopter parenting in child outcomes, there is little empirical cross-cultural research on the academic outcomes of helicopter parenting for late adolescents (Jung, E., Hwang, W., Kim, S., Sin, H., Zhang, Y., & Zhao, Z,2019). So, hypothesis 1 can be put forward. H1: Emotional intelligence-Self-efficacy. Emotional intelligence has a positive effect on self-efficacy.

Self-efficacy is a key component in mental health recovery and improvement in subjective well-being. Mental illness is often resultant of environmental stressors, highlighting the importance of coping skills (Ngooi BX, Wong SR, Chen JD, Yin Koh VS, 2022). Therefore, hypothesis 2 can be put forward. H2: Self-efficacy ->Subject Well-being. Self-efficacy has a positive effect on subjective well-being.

Some scholars investigated health-promoting behaviors that mediate the relationship between emotional intelligence (EI) and subjective well-being in the unemployed population (Peláez-Fernández MA, Rey L, Extremera N, 2022). And other scholars investigated subjective economic inequality decreases emotional intelligence, especially for people of high social class (Schmalor, A., & Heine, S. J.,2022). Consequently, hypothesis 3 can be put forward. H3: Emotional intelligence->Subjective Well-being. Emotional intelligence has a positive effect on subjective well-being.

Subjective well-being (SWB) encompasses not only PA and NA but also life satisfaction (Diener, Emmons, Larsen, & Griffin, 1985). Moreover, others have argued that SWB represents only one type of well-being, hedonic well-being, which emphasizes pleasure and satisfaction; a second type, eudemonic well-being, comprises variables posited to be directly indicative of psychological health, such as vitality and self-actualization (Ryan & Deci, 2001; Ryff & Keyes, 1995).

3. Methodology

This design can be divided into five steps. First, identify variables and questionnaire. Next, to conduct data analysis. Then, the pilot study, including the IOC test, the reliability test, and the validity test. After that, the formal questionnaire was obtained, and the confirm factor analysis was carried out, which included descriptive statistics, a validity & reliability test, and a hypothesis test. Finally, the results were discussed.

Before the formation of a formal questionnaire, this study invited five experts to conduct IOC tests. The expert consultation questionnaire average score was 0.97 greater than 0.5. Therefore, the content validity of the measurement items could be guaranteed. Secondly, SPSS was utilized for reliability analysis, and exploratory factor analysis (EFA) in the pilot test and the formal questionnaire was created. Thirdly, confirmatory factor

analysis (CFA) was conducted. Fourthly, the structural model was performed to evaluate the model fit based on the research conceptual framework, as well as conducted path coefficient estimation Finally structural equation modeling (SEM) with bootstrapping estimation was to test research hypotheses.

In the quantitative analysis, the target population is college students from universities in Shanxi Province, China. 409 valid questionnaires of "College Students' Emotional Intelligence on Subjective Well-being" were collected. The questionnaire is composed of an emotional intelligence scale, general self-efficacy scale, life satisfaction scale, and positive and negative emotion scale. The questionnaire involves variables such as emotional intelligence, subjective well-being, and self-efficacy, and so on. The IOC method was used to evaluate all research variables. The items in the questionnaire were measured using the 7-point Likert scale. The measurement of variables is shown in Table 1. Table 1 indicates the measurements of variables used in the study as established in the existing literature.

Table 1: Latent and Observed Variables in the Study

Latent variable	Observed variable	Scholars
Emotional Intelligence (EI)	Emotion Monitor Emotion Application Evaluation of Others' Emotions Social Abili*ty*	Daniel Goleman (1995)
Subjective Well-Being (SWB)	Life Satisfaction Scale Positive affection Negative Affection	Diener-E. S. & Shigehiro, O. (1997), Wang. (2013, 2020), Theresa, K. (2005).
Self-efficacy (SE)	Self-efficacy	Bandura (2003). Zhang & Zhou (2020)

To check the internal consistency of the measurements, Cronbach's alphas and composite reliability were calculated. The exploratory factor analysis results of independent variables, mediators, and dependent variables are shown in Table 2 and Table 3 respectively.

Table 2: Exploratory Factor Analysis of Independent Variables

Latent variable	Dimension	Cronbach's Alpha	KMO
Emotional Intelligence (EI)	Emotion Monitor (EM)	.751	.928
	Emotion Application (EA)	.821	
	Evaluation of Others' Emotions (EOE)	.856	
	Social Ability (SA)	.719	

Table 3: Exploratory Factor Analysis of Mediator and Dependent Variables

Latent variable	Dimension	Cronbach's Alpha	KMO
Subjective Well-Being (SWB)	Life Satisfaction Scale (LSS)	.896	.926
	Positive affection (PA)	.956	
	Negative Affection (NA)	.893	
Self-efficacy (SE)	Self-efficacy	.915	.919

As can be seen from the data in Table 2 and Table 3 that the reliabilities and validities were satisfactory as Cronbach's alpha and KMO values all exceeded 0.70, while composite reliability also exceeded 0.70 (Hair, 2018).

4. Results

The confirmatory factor analysis (CFA) was conducted, and the Structural Equation Model was utilized in understanding the relationship between emotional intelligence, subjective well-being, and self-efficacy. The full model is composed of the emotional intelligence model, self-efficacy model, and subjective well-being model. Next, focus on the emotional intelligence model and subjective well-being model.

4.1 Emotional Intelligence Model The emotional intelligence (EI) model includes four dimensions: emotional monitoring (EM), emotional application (EA), social ability (SA), and evaluation of others' emotions (EOE). The four dimensions of emotional intelligence are combined, and a dimensional correlation analysis is conducted. The run results of the first-order emotional intelligence are shown in Figure 2, and the run results of the second-order model are shown in Figure 3.

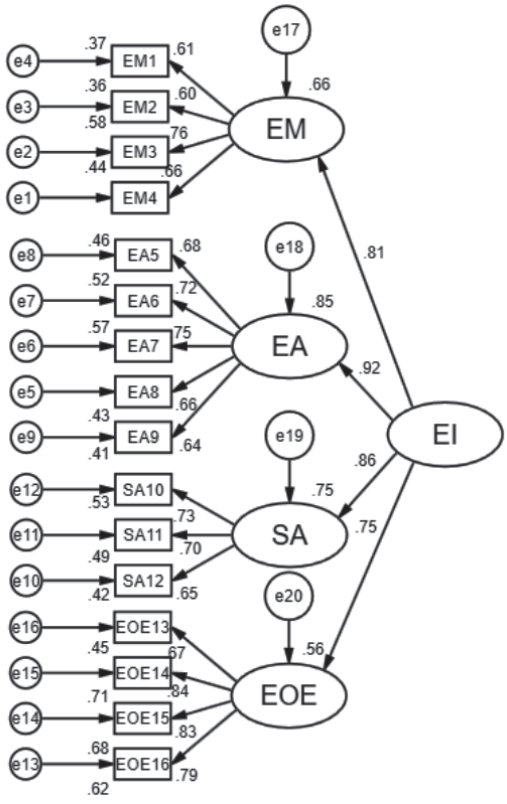

Figure 2 First-order EI Model

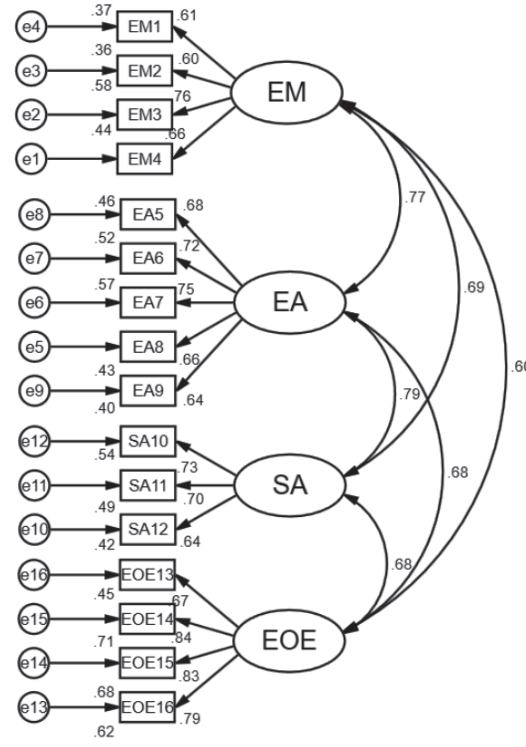

Figure 3 Second-order EI Model

As can be seen from Figure 3 that EM, EA, SA, and EOE are represented by EI. The factor loadings of second-order emotional intelligence models were all between 0.65 and 0.95. After the second-order emotional intelligence model is created, the Maximum Likelihood estimation parameter is selected for convergence validity analysis, and the results are shown in Table 4.

Table 4 Convergence Validity of Second-order Emotional Intelligence

Variables	Items	Significance Estimation of Parameter					Convergent Validity		
		UnStd.	S.E.	T-value	P	Std.	SMC	CR	AVE
EI	EM	1.000				.814	.663	.905	.705
	EA	1.041	.111	9.363	***	.920	.846		
	SA	.786	.088	8.967	***	.865	.748		
	EOE	1.133	.119	9.554	***	.751	.564		
EM	EM4	1.000				.663	.440	.754	.436
	EM3	1.179	.098	11.996	***	.762	.581		
	EM2	.861	.086	10.037	***	.597	.356		
	EM1	.894	.088	10.165	***	.606	.367		
EA	EA8	1.000				.658	.433	.819	.476
	EA7	1.144	.090	12.694	***	.752	.566		
	EA6	1.033	.084	12.291	***	.722	.521		
	EA5	.892	.076	11.661	***	.676	.457		
	EA9	.826	.074	11.084	***	.637	.406		
SA	SA12	1.000				.646	.417	.734	.479
	SA11	1.216	.110	11.018	***	.697	.486		
	SA10	1.119	.098	11.363	***	.731	.534		
EOE	EOE16	1.000				.787	.619	.864	.615
	EOE15	.904	.052	17.425	***	.826	.682		
	EOE14	.965	.054	17.764	***	.841	.707		
	EOE13	.733	.053	13.760	***	.672	.452		

*p<0.1, **p<0.05, ***p<0.01

It can be seen from Table 4 that the parameters are estimated within an acceptable range, and all observed variables had significant,

CR values in table 4 are all greater than 0.7, which is acceptable (Hair, 1997). The AVE stands for the square roots of the average variance extracted. Both AVE of

facet EOE (0.615) and EI (0.705) are greater than 0.5, and the convergence validity is ideal. The AVE of facet SA (0.479) and EA (0.476) is close to 0.5, and the convergence validity is good. Only the AVE of EM (0.436) is slightly less than 0.5, which is acceptable (Fornell & Larcker 1981).

The discriminative validity of the emotional intelligence model was observed through a matrix, as shown in Table 5.

Table 5 Discriminant Validity of Emotional Intelligence

Facet	**AVE**	**EOE**	**SA**	**EA**	**EM**
EOE	.613	.783			
SA	.481	.680	.694		
EA	.479	.682	.788	.692	
EM	.439	.596	.687	.766	.662

Table 5 is a lower triangular matrix from which the correlation between the dimensions can be observed. The diagonal elements of the matrix represent the square root AVE of EOE, SA, EA, and EM in turn, while the remaining elements represent the correlation between the four dimensions. The diagonal elements are greater than the off-diagonal elements in the corresponding rows and columns, so the emotional intelligence model has adequate discriminative validity.

The Fit Indices of the first-order model and the second-order model of emotional intelligence are compared, as shown in Table 6.

Table 6 Fit Indices of First-order and Second-order Emotional Intelligence Model

Index	χ^2/df	CFI	GFI	AGFI	NFI	IFI	TLI	RMSEA	SRMR
Criterion	$1<\chi^2/df<3$	>.90	>.90	>.90	>.90	>.90	>.90	<.08	<.08
1st-order EI Results	2.122	.959	.942	.919	.927	.960	.950	.052	.0455
2nd-order EI Results	2.103	.959	.941	.920	.926	.960	.951	.0052	.0452

Table 6 shows that it is appropriate to fit indices of the second-order emotional intelligence model in confirmatory factor analysis.

In order to determine whether the second-order model can replace the first-order model, the TC (Target Coefficient) needs to be calculated. The TC is the chi-square value of a first-order model divided by the chi-square value of the second-order model. Chi-square values of the first-order and second-order models and the target coefficient are presented in Table 7.

Table 7 The Chi-Square Table of First-order Complete Correlation Model and Second-order Model of Emotional Intelligence

Index	First-order EI Model	Second-order EI Model	TC
χ^2	207.960	210.315	
			.9888

The chi-square values of the first-order model and the second-order model are listed in Table 4.30. When the target coefficient is calculated, the chi-square value of the first-order perfectly correlated model is divided by the chi-square value of the second-order model. The obtained TC is 0.9888. When the value of TC is about 0.8, the second-order model can be used to replace the first-order model. Therefore, when analyzing the structural model, the second-order model of EI is used instead of the first-order model.

4.2 Subjective Well-being Model

Combine the three dimensions of subjective well-being and conduct a dimensional correlation analysis. The run results of the first-order model of subjective well-being are shown in Figure 4, and the results of the second-order model are shown in Figure 5.

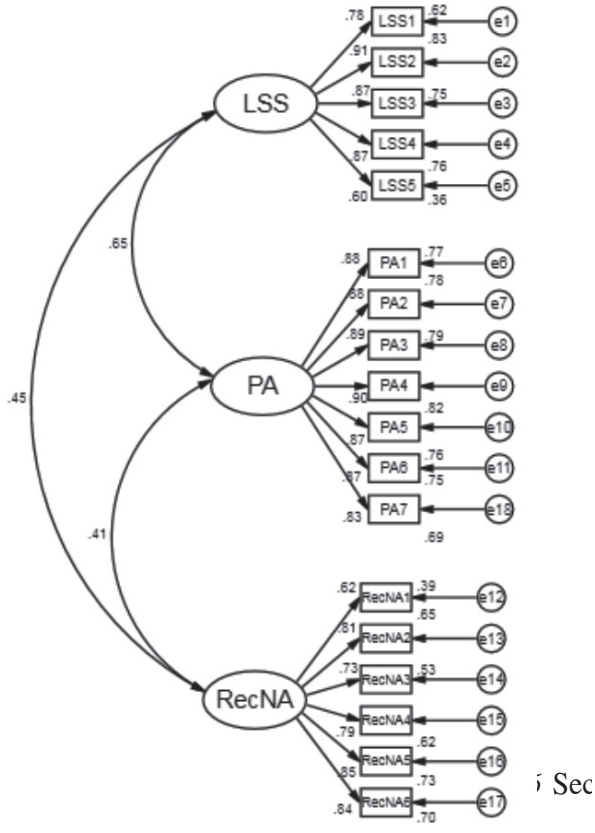

Figure 4 First-order SWB Model

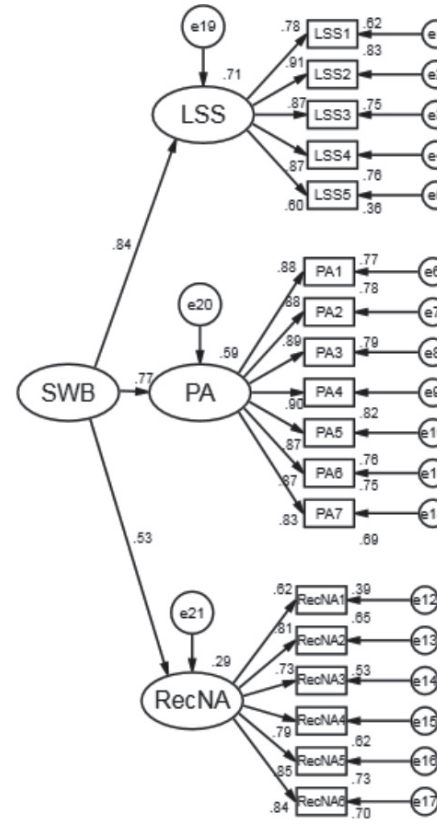

Figure 5 Second-order SWB Model

It can be seen from Figure 4 and Figure 5 that the subjective well-being (SWB) model includes three dimensions: life satisfaction state (LSS), positive affection (PA), and negative affection (NA). To unify the interpretation of subjective well-being scores. RecNA here is the abbreviation of Recode Negative effect for negative affect.

After the subject well-being model is created, the Maximum Likelihood estimation parameter is selected for convergence validity analysis, and the results are shown in Table 8

Table 8 Convergence Validity of Subject Well-being Model

Facet	Items	Significance Estimation of Parameter					Convergent validity		
		UnStd.	S.E.	T-value	P	Std.	SMC	CR	AVE
LSS	LSS1	1.000				.781	.610	.906	.664
	LSS2	1.177	.057	20.629	***	.911	.830		
	LSS3	1.118	.058	19.348	***	.864	.746		
	LSS4	1.168	.060	19.594	***	.873	.762		
	LSS5	1.040	.082	12.656	***	.608	.370		
PA	PA1	1.000				.877	.769	.958	.766
	PA2	1.030	.040	25.830	***	.885	.783		
	PA3	.978	.038	25.764	***	.884	.781		
	PA4	1.077	.040	27.178	***	.905	.819		
	PA5	1.058	.042	25.369	***	.877	.769		
	PA6	1.005	.041	24.664	***	.866	.750		
	PA7	1.000	.044	22.698	***	.830	.689		
RecNA	RecNA1	1.000				.625	.391	.901	.613
	RecNA2	1.299	.098	13.248	***	.812	.659		
	RecNA3	1.171	.095	12.299	***	.733	.537		
	RecNA4	1.347	.104	12.917	***	.784	.615		
	RecNA5	1.409	.103	13.726	***	.856	.733		
	RecNA6	1.357	.101	13.487	***	.834	.696		

It can be seen from Table 7 that the parameters are estimated within an acceptable range. Here's the t-test, and the P presents significance, which is less than 0.01 and is very significant.

The CR here is the composite reliability used to measure the internal consistency of the facets. CR values in the table are all greater than 0.9, which is ideal (Hair, 1998). The AVE stands for the square roots of the average variance extracted. The AVE of facet LSS (0.664), facet PA (0.766), and facet RecNA(0.605) is greater than 0.5, and

the convergence validity is ideal (Fornell &Larcker 1981). The discriminative validity of the subject well-being model was observed through a matrix, as shown in Table 9.

Table 9 Discriminant Validity of Subject Well-being Model

Facet	**AVE**	**RecNA**	**PA**	**LSS**
RecNA	.613	.778		
PA	.766	.410	.875	
LSS	.664	.451	.648	.815

Table 9 is a lower triangular matrix from which the correlation between the dimensions can be observed. The diagonal elements of the matrix represent the square root AVE of RecNA, PA, and LSS in turn, while the remaining elements represent the correlation of the three dimensions. The diagonal elements are greater than the off-diagonal elements in the corresponding rows and columns, so the subject well-being model has adequate discriminative validity. The fit indices of the fully correlated subject well-being model are shown in Table 10.

Table 10 Fit Indices of Subject Well-being Model

Index	χ^2/df	CFI	GFI	AGFI	NFI	IFI	TLI	RMSEA	SRMR
Criterion	$1<\chi^2/df<3$	>.90	>.90	>.90	>.90	>.90	>.90	<.08	<.08
Results	2.758	.962	.907	.880	.942	.962	.956	.066	.036

Table 10 shows that it is appropriate to fit indices of the subject well-being model in confirmatory factor analysis. There are three dimensions of first-order subject well-being models, and to simplify it, replace the first order with the second-order model. After the creation of the second-order model of subject well-being, the value of the path coefficient is set to be 1, The run results are shown in figure 5.

As can be seen from figure 5 that LSS, PA, and RecNA are represented by SWB.

4.3 Full Model and Path Analysis

The self-efficacy model has only one dimension. The emotional intelligence model, subjective well-being model, and self-efficacy model are combined to construct the full

model, as shown in Figure 11. The measurement model and the structural model are put together to obtain the full model, as shown in figure 6.

It can be seen from figure 6 that when the emotional intelligence model, self-efficacy model, and subjective well-being model are combined, the path coefficients of each model are greater than 0.6. More detailed indicators are shown in Table 11.

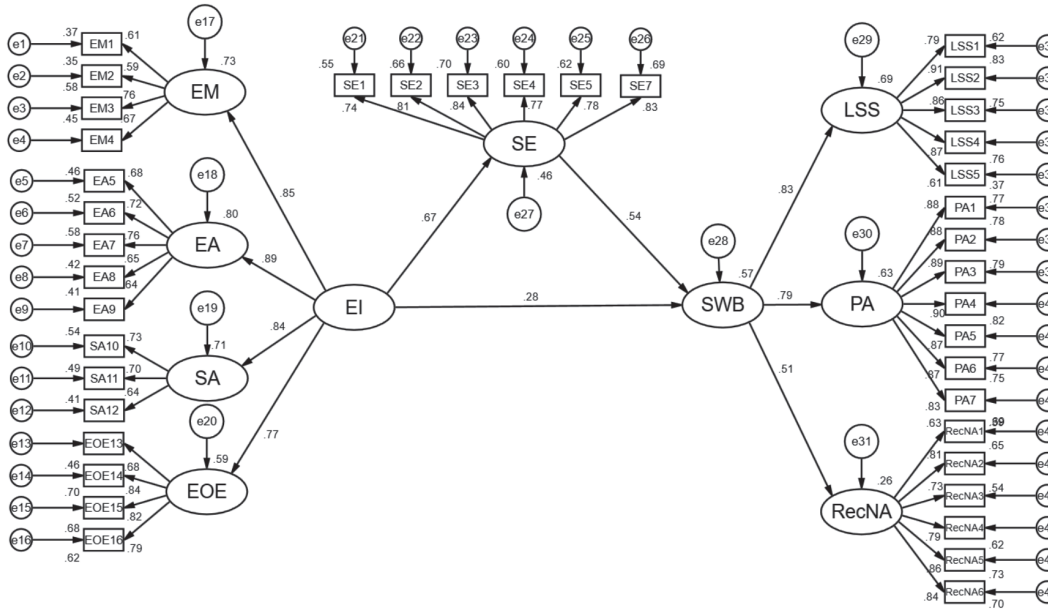

Figure 6 Full Model

Table 11 Fit Indices of Full Model

Index	χ^2/df	CFI	GFI	AGFI	NFI	IFI	TLI	RMSEA	SRMR
Criterion	$1<\chi^2/df<3$	>.90	>.90	>.90	>.90	>.90	>.90	<.08	<.08
Results	2.197	.922	.832	.811	.978	.918	.912	.054	.054

It can be seen from table 11 that there are 10 fit indices, only GFI (0.832) and RMR (0.84) are slightly lower than the reference standard, but they are also within the acceptable range, and the other 8 fit indices are higher than the reference standard in the confirmatory factor analysis of the full model. More detailed indicators are shown in Table 12.

Table 12 Parameter Estimation of Full model

Path			UnStd	S.E.	T-value	P	Std
EI	→	SE	0.999	0.102	9.759	***	0.694
S*E*	→	SWB	0.449	0.061	7.322	***	0.564
E*I*	→	SWB	0.288	0.085	3.38	***	0.251
E*I*	→	EM	1				0.851
E*I*	→	EA	0.944	0.097	9.699	***	0.896
E*I*	→	SA	0.713	0.078	9.15	***	0.84
E*I*	→	EOE	1.092	0.108	10.122	***	0.764
SW*B*	→	LSS	1				0.826
SW*B*	→	PA	1.036	0.087	11.852	***	0.795
SW*B*	→	RecNA	0.522	0.069	7.58	***	0.512

As shown in Table 12, all the P are less than 0.01 and each is very significant. The path from EI to SWB indicates that EI has a positive effect on SWB. The path from EI to SE indicates that EI has a positive effect on SE. The path from SE to SWB indicates that SE has a positive impact on SWB.

In confirmatory factor analysis, the sample size is 409. We are more interested in the error between the point estimate obtained from the sample data and the true value of the statistic in the unknown population. At this point, it is necessary to calculate the confidence interval of the target statistic. Therefore, the bootstrapping method is introduced to calculate the confidence interval of statistics.

A variable may be a cause variable for some variables and a response variable for others (Wang, 2020). For such a complex causal relationship, statistical analysis is usually carried out by path analysis.

4.4 Test of Mediator effect

When it comes to the confidence interval, the most familiar one is to calculate the confidence interval of the population mean. This is because there is an analytical

expression for the confidence interval of the population mean under the central limit theorem and the normal distribution assumption. The test statistic obtained by using the sample mean and its standard error satisfies the student's t-distribution, and the confidence interval can be easily obtained by looking up the table to find the critical value of the corresponding t-statistic on both sides of the confidence interval. Since the distribution is symmetric, the confidence interval of the population mean is symmetric with respect to the sample mean. The confidence interval of the mean calculated by t-distribution implies that the population distribution satisfies the assumption of normal distribution. However, for practical problems, the population does not satisfy the normal distribution, so we can't use the t distribution to calculate the confidence interval of the mean.

Therefore, the bootstrapping method is introduced to calculate the confidence interval of statistics. In the analysis of the mediator effect, the two methods of the Sobel Test and Bootstrapping were used. The result is listed in table 13.
The

Table 13 Sobel Test and Bootstrapping Estimation of Full Model

Path	Point Estimate	Product of Coefficients		Bootstrapping				
				Bias-corrected 95% CI		Percentile 95% CI		Two-tailed Significance
		S.E.	Z	Lower	Upper	Lower	Upper	
				Total Effects				
EI->SWB	0.737	0.120	6.142	0.528	0.926	0.552	0.95	0.000
				Direct Effects				
EI->SWB	0.288	0.140	2.057	0.08	0.528	0.099	0.557	0.007
				Indirect Effects				
EI- >SWB	0.449	0.090	4.989	0.326	0.622	0.295	0.586	0.000

From Table 13, it can be concluded that point estimation of the total effect is the sum of direct effect and indirect effect. That is 0.737=0.288+0.449; each effect has a Z greater than 2; The confidence interval (CI) of each effect does not include zero; The significance values of two-tails are less than 0.05.

Therefore, combined with Sobel Test conditions and Bootstrapping confidence interval conditions, it can be seen that self-efficacy, as a mediator variable, is a partial mediator and has significant effects.

5. Discussions

Hypothesis 1 reveals that emotional intelligence has a positive impact on self-efficacy. Emotional intelligence consists of self-awareness, self-regulation, self-control, interpersonal relationship, empathy, and other elements. The sense of self-efficacy refers to the subjective judgment of whether one can successfully carry out a certain achievement behavior, which is the same concept as the sense of self-ability. It can be seen that when people have high emotional intelligence, they will have successful experiences, thus enhancing their sense of self-efficacy. On the contrary, if emotional intelligence is low, self-efficacy will be weak. The findings support the suggestions of (Zhang et al., 2022).

Hypothesis 2 reveals that with self-efficacy as the mediator variable, self-efficacy has a significant positive correlation with subjective well-being and various dimensions. Emotional intelligence can not only directly affect college students' subjective well-being, but also indirectly affect college students' subjective well-being through the mediator effect of self-efficacy. When college students have a higher sense of self-efficacy, it will further stimulate college students' self-acceptance and identification, thus producing higher subjective well-being.

Hypothesis 3 reveals that emotional intelligence has a positive impact on subjective well-being. The dimension of emotional intelligence explains that emotional intelligence is composed of self-awareness, self-regulation, self-control, interpersonal relationships, empathy, and other elements. The factors that affect college students' emotional management ability are self-awareness, cognitive level, attitude tendency, processing methods, and family education model. College students' cognition of society plays an important role in social support. The findings support the suggestions of Sun Ying. (2021).

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6. Conclusion and Recommendation

This study provides empirical evidence to prove that college students' sense of self-efficacy mediates between emotional intelligence and subjective well-being. From a practical point of view, the relationship between college students' emotional intelligence and subjective well-being shows that college students can improve their subjective well-being by improving their emotional intelligence, laying a good foundation for adapting to society. Through extensive reading and deep thinking, college students can establish friendly relations with positive friends, develop a good habit of lifelong learning, cultivate positive self-consciousness, apply attribution theory to things, rationalize causes, adjust their mentality, and give themselves positive and happy psychological hints.

In this study, the author adopted a combination of qualitative and quantitative methods. In the qualitative research, 20 experts from different fields of management, psychology, and medicine and depth interviews were conducted to determine the five factors affecting the emotional management of college students as self-awareness, self-motivation, self-regulation, empathy, and handling interpersonal relationships. The research combined with emotions theory, social cognitive theory, event theory, the theory of self-efficacy, subjective well-being and self-determination theory, and the structural equation model (SEM). The results show that emotional intelligence has a positive influence on subjective well-being, and self-efficacy is a partial mediator variable between them. The author also provides reasonable suggestions for enhancing the emotional management ability of college students and improving subjective well-being, which better achieves the research objectives. In this study, emotion theory and self-determination theory were introduced to the subject. The second-order model of emotional intelligence is boldly tried, and a good practical effect is achieved. In the future, the research on emotion management can be further studied on the second-order model.

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