

The Mediating Role of Core Self-evaluation

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Abstract: In order to explore the relationship between social support, learning engagement, and core self-evaluation among university students, this study conducted a questionnaire survey on 50 university students using the Adolescent Social Support Scale, Learning Engagement Scale, and Core Self-evaluation Scale. The results showed that: (1) the social support, learning engagement, and core self-evaluation of university students were all at a medium to high level; (2) social support of university students had a positive predictive effect on core self-evaluation and learning engagement; (3) the core self-evaluation of university students did not play a mediating role between social support and learning engagement.

Keywords: Social support; Learning engagement; Core self-evaluation; University students

1. Introduction

With the development of positive psychology, researchers are paying more attention to the positive psychological qualities and behaviors of individuals. Research in the learning field has also begun to shift from learning burnout and stress to learning engagement. Previous studies have shown that learning engagement can not only be used as an important indicator to measure the learning atmosphere and teaching quality in schools, but it can also significantly predict academic achievement and dropout rates among students^[1]. Therefore, exploring the mechanism of the effect of social support on learning engagement from the perspective of positive psychology can better help university students engage in their learning life, which has important contemporary significance^[2]. This study aims to explore whether there is a relationship between social support and learning engagement among university students, what kind of relationship exists, and to further examine the role of core self-evaluation in this process^[3].

2. Methodology

2.1 Adolescent Social Support Scale (also known as the College Student Social Support Evaluation Scale)

The Adolescent Social Support Scale developed by Ye Yuemei et al. (2008) was used, which consists of 17 items and three dimensions: subjective support (1, 4, 6, 7, 9), objective support (8, 10, 11, 13, 15, 16), and support utilization (2, 3, 5, 12, 14, 17)^[4]. The 5-point scoring method is used (1="Not in line", 5="In line"), and the higher the score, the higher the respondent's social support level. In this study, the alpha coefficient of the Adolescent Social Support Scale is 0.966, the alpha coefficient of the subjective support dimension is 0.915, the alpha coefficient of the objective support dimension is 0.916, and the alpha coefficient of the support utilization dimension is 0.935, indicating that the questionnaire has good reliability. According to reports in related literature, the construct validity of this scale is good.

2.2 College Student Learning Engagement Scale (UWES-S)

The College Student Learning Engagement Scale (Utrecht Work Engagement Scale-Student, UWES-S) revised by Li Xiyin et al. (2010) was used, which consists of 17 items and three dimensions: motivation (1, 2, 3, 4, 6, 8), vigor (7, 9, 11, 14, 16), and dedication (5, 10, 12, 13, 15)^[5]. A 7-point scoring method is used (0="Never", 6="Always"), and the higher the score, the higher the respondent's learning engagement level^[6]. In this study, the alpha coefficient of the College Student Learning Engagement Scale is 0.977, the alpha coefficient of the motivation dimension is 0.950, the alpha coefficient of the vigor dimension is 0.940, and the alpha coefficient of the dedication dimension is

0.951, indicating that the questionnaire has good reliability. According to reports in related literature, the construct validity of this scale is good.

2.3 Core Self-Evaluation Scale (CSES)

The Core Self-evaluations Scale (CSES) revised by Du Jianzheng et al. (2012) was used, which consists of 10 items and is a single-dimensional self-rating scale^[7]. A 5-point scoring method is used (1="Strongly disagree", 5="Strongly agree"), and items 2, 3, 5, 7, 8, and 10 are reverse-scored. The higher the score, the higher the respondent's core self-evaluation level. In this study, the alpha coefficient of the Core Self-evaluation Scale for college students is 0.843, and the split-half reliability is 0.928, indicating that the questionnaire has good reliability. According to reports in related literature, the construct validity of this scale is good.

3. Results and discussion

3.1 Descriptive Statistics of College Students' Social Support, Learning Engagement, and Core Self-Evaluation

Table 1: Descriptive statistics of college students' social support, learning engagement, and core self-evaluation

	N	Min	Max	Mean	Std. Dev.
Social Support	50	1.71	5	3.7402	0.88155
Learning Engagement	50	1	7	4.2178	1.22294
Core Self-Evaluation	50	1	5	3.3540	0.64118

As can be seen from Table 1, the levels of social support, learning engagement, and core self-evaluation among college students are all at a medium to high level.

3.2 Independent Samples t-test for College Students' Social Support, Learning Engagement, and Core Self-Evaluation

Table 2: Independent samples t-test for college students' social support, learning engagement, and core self-evaluation

	Gender	N	Mean	Std. Dev.	t	p
Social Support	Male	26	3.4723	0.84266	-2.336	0.024*
	Female	24	4.0304	0.84546		
Learning Engagement	Male	26	4.1508	1.32324	-0.400	0.691
	Female	24	4.2904	1.12803		
Core Self-Evaluation	Male	26	3.4885	0.59419	1.5660	0.124
	Female	24	3.2083	0.67044		

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$, same below

As can be seen from Table 2, the level of social support for female college students is higher than that of male college students.

3.3 Correlation Analysis of College Students' Social Support, Learning Engagement, and Core Self-Evaluation

Table 3: Correlation analysis of college students' social support, learning engagement, and core self-evaluation

	Social Support	Learning Engagement	Core Self-Evaluation
Social Support	1		
Learning Engagement	0.524**	1	
Core Self-Evaluation	0.392**	0.277	1

As can be seen from Table 3, there is a significant positive correlation between social support and learning engagement, and between social support and core self-evaluation.

3.4 Regression Analysis of College Students' Social Support, Learning Engagement, and Core Self-Evaluation

(1) Regression Analysis of College Students' Social Support and Learning Engagement

A regression analysis was conducted with college students' social support as the predictor variable and learning engagement as the dependent variable.

Table 4: Regression analysis of college students' social support and learning engagement

Model	Unstandardized Coefficients		Standardized Coefficients	Adjusted R ²	F	t	D-W
	B	Std. Error	β				
Constant	1.496	0.655		0.260	18.227***	2.285*	2.301
Social Support	0.728	0.170	0.525				

As can be seen from Table 4, college students' social support can significantly positively predict learning engagement, explaining 26% of the variance in learning engagement. The D-W value is 2.301. After consulting the Durbin-Watson test table, it was found that the residual sequence is independent. After plotting a histogram and a normal probability plot, it was found that the residual distribution is normally distributed.

The regression equation for this analysis is: $Y=1.496+0.728X$.

(2) Regression Analysis of College Students' Social Support and Core Self-Evaluation

A regression analysis was conducted with college students' social support as the predictor variable and core self-evaluation as the dependent variable.

Table 5: Regression analysis of college students' social support and core self-evaluation

Model	Unstandardized Coefficients		Standardized Coefficients	Adjusted R ²	F	t	D-W
	B	Std. Error	β				
Constant	2.288	0.371		0.136	8.699***	6.169***	1.998
Social Support	0.285	0.097	0.392				

As can be seen from Table 5, college students' social support can significantly positively predict core self-evaluation, explaining 13.6% of the variance in core self-evaluation. The D-W value is 1.998. After consulting the Durbin-Watson test table, it was found that the residual sequence is independent. After plotting a histogram and a normal probability plot, it was found that the residual distribution is normally distributed.

The regression equation for this analysis is: $Y=2.288+0.285X$.

3.5 Analysis of the Mediating Effect of Core Self-Evaluation on the Relationship Between Social Support and Learning Engagement

(1) Mediation Effect Analysis Model

This study uses the method simplified by Wen Zhonglin and others (2004) based on Baron and Kenny's causal stepwise regression test method, as shown in Figure 1.

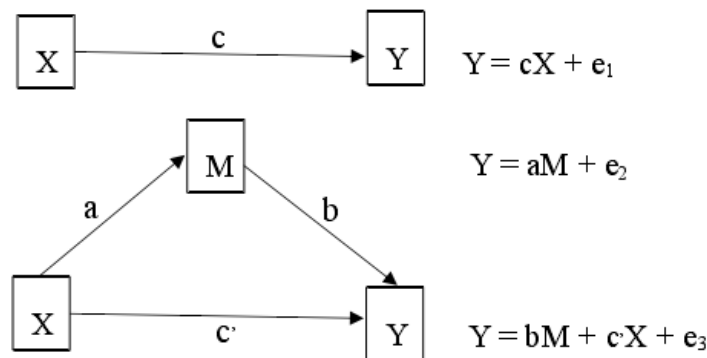


Figure 1: Theoretical model of mediation effect

According to this method, three regression equations can be listed for this study:

- ① Learning Engagement = cSocial Support + e1
 ② Core Self-Evaluation = aSocial Support + e2
 ③ Learning Engagement = c'Social Support + bCore Self-Evaluation + e3

(2) Analysis of the Mediating Effect of Core Self-Evaluation on the Relationship between Social Support and Learning Engagement

Based on the above analysis, the mediating effect of college students' core self-evaluation is analyzed: first step, regression analysis with social support as the predictor variable and learning engagement as the dependent variable; second step, regression analysis with social support as the predictor variable and core self-evaluation as the dependent variable; third step, regression analysis with both social support and core self-evaluation as predictor variables and learning engagement as the dependent variable, as shown in Table 6.

Table 6: Analysis of the mediating effect of core self-evaluation on the relationship between social support and learning engagement

	Predictor Variable	Dependent Variable	Adjusted R ²	F	B	t	p
Model 1	Social Support	Learning Engagement	0.260	18.227***	0.728	4.269***	0.000
Model 2	Social Support	Core Self-Evaluation	0.136	8.699**	0.285	2.949**	0.005
Model 3	Social Support	Learning Engagement	0.251	9.198***	0.682	3.656***	0.001
	Core Self-Evaluation				0.162	0.631	0.531

First step, regression coefficient $c=0.728$, significance level is 0.000, which meets the requirement; second step, regression coefficient $a=0.285$, significance level is 0.005, which meets the requirement; third step, the regression coefficient b of the mediating variable core self-evaluation is 0.162, significance level is 0.631, and the regression coefficient c' of the predictor variable social support is 0.682, significance level is 0.001, which does not meet the requirement. Further sobel test, $p=0.236 > 0.05$, thus the mediating effect is not significant.

Therefore, the level of social support among college students can directly influence the level of learning engagement, and it cannot influence learning engagement through the level of core self-evaluation.

4. Conclusion

(1) The General Situation of Social Support, Learning Engagement, and Core Self-Evaluation in College Students

The results of the study show that the average scores of social support, learning engagement, and core self-evaluation for college students are 3.7402, 4.2178, and 3.3540 respectively, all of which are above average. This indicates that most college students perceive the existence of social support, and also have a high level of self-understanding, which allows them to actively, positively, and consciously engage in learning.

The average score for social support among female college students is 4.0304, which is higher than that of male students (3.4723, $p=0.024^*$). The author believes that compared to males, females are more sensitive and emotionally refined. They are more capable of appreciating the help and support they receive from others, thus they perceive a higher level of social support.

(2) Analysis of Correlation and Regression Results of Social Support, Learning Engagement, and Core Self-Evaluation among College Students

The study results show that social support among college students can significantly positively predict learning engagement and core self-evaluation. That is, the higher the level of social support among college students, the higher their level of learning engagement and core self-evaluation. Social support is an indispensable part of everyone's life and plays an important role in the self-understanding and learning engagement of college students. The stage in which college students are in is a period closely connected with society. Any of their activities will be subject to external environmental constraints. Meanwhile, at this stage, the self-awareness of college students is constantly strengthened, and their perception of surrounding things becomes increasingly sensitive. Therefore, when college students perceive external social support, they will become more confident and more actively, positively, and consciously engage in learning.

(3) Analysis of the Mediating Effect of Core Self-Evaluation Between Social Support and Learning Engagement in College Students

The study results show that the mediating effect of college students' core self-evaluation between social support and learning engagement is not significant. The author believes that college students are relatively mature in terms of self-awareness. Although they can perceive the influence of social support, which has a positive effect on their core self-evaluation, this change only exists at the level of thought and has not been translated into practice to become more active, positive, and conscious in engaging in learning.

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