

# The influence of prosocial behavior on Affective state of college students: the mediating role of self-esteem

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**Abstract:** The purpose of this study was to explore the correlation between prosocial behavior, self-esteem and affective state of college students, and to verify the mediating role of self-esteem between prosocial behavior and affective state. The Adolescent Prosocial Behavior Measurement Scale (APTM), Self-esteem Scale (SES) and Positive and Negative affective Scale (PANAS) were used to investigate 990 college students. The results showed that prosocial behavior were significantly correlated with positive affections, but not significantly correlated with negative affections. Self-esteem is positively correlated with positive affections and negatively correlated with negative affections. Mediation tests show that self-esteem plays a partial mediating role between prosocial behavior and positive affection; Self-esteem has a suppression effect between prosocial behavior and negative affection.

**Keywords:** Prosocial behavior, self-esteem, Positive affective, Negative affective

## 1. Introduction

Affective States is a kind of psychological activity mediated by individual desire and need. It is one of the most explicit and direct indicators of individual mental health, quality of life and happiness of people pursuing goals. General affection research divides affections into positive affections and negative affections. Generally speaking, people always pursue more positive affections, hoping to reduce the negative affections of the individual. In this process, individual behavior is a more controllable factor.

Prosocial behaviors refer to all behaviors that conform to social expectations and are beneficial to others, groups or society. Prosocial behaviors mainly include helping others, sharing, humility, volunteering, comfort, cooperation and charitable donation. The existing experience and scientific research prove that prosocial behavior is not only beneficial to the society, to the object of behavior, but also to the actor himself. Therefore, prosocial behavior tends to be the result part of the research factors, that is, there is a lot of research discussing the various factors that affect prosocial behavior and then discussing how to increase the prosocial factors. But there is relatively little research on prosocial behavior as a cause. This study attempts to discuss whether increasing individual prosocial behavior can increase individual positive affections and reduce individual negative affections through empirical investigation.

As one of the basic psychological needs of individuals, self-esteem plays an important role in the healthy development of both body and mind. A large number of studies have proved that self-esteem is significantly related to prosocial behavior, and self-esteem is significantly related to factors such as mental health and subjective well-being, which are closely related to affections. Therefore, on the basis of exploring the relationship between prosocial behavior, affective state and self-esteem, this study further explores the specific role of self-esteem in prosocial behavior on affective state.

## 2. Methods

### 2.1 Procedures and Participants

The study participants were college students in China. These students were selected by the researcher from first year to fourth year of college and different majors through collaboration with four university's mental health teachers. The researcher distributed 1035 questionnaires and collected 990 valid questionnaire with effective rate of the questionnaire as 96%.

### 2.2 Measures

Adolescent Prosocial Behavior Tendency Scale (APTM, CHN).

The scale for this study was compiled by Carlo and revised by Kou Yu with a total of 26 questions. The revised scale is proved to be suitable for Chinese adolescents. In this study, the Cronbach  $\alpha$  coefficient of the scale was 0.956, showing good reliability.

Self-Esteem Scale (SES, CHN).

Rosenberg's SES scale was used in this study. The self-esteem scale was translated and revised into Chinese by Chinese scholars Ji Yifu and Yu Xin in 1993. In this study, the Cronbach alpha coefficient of this scale was 0.853, which is a good reliability. The scale is widely used in China.

The Positive and Negative Affective Scale

The PANA scale of Watson and Clark was adopted in this study. The scale is composed of 20 adjectives reflecting affective, including two dimensions of positive affective and negative affective, with 10 adjectives in each dimension. In this study, the Cronbach Alpha coefficient of positive and negative affective was 0.919 and 0.915, which is a very good reliability.

## 3. Results

### 3.1 The general status of prosocial behavior, self-esteem and affective state of college students

Higher scores on the adolescent Prosocial Behavior Scale indicate more prosocial tendencies and behaviors, with an overall score

ranging from 26 to 130. The research results are shown in Table 1. The total score of prosocial behavior of college students is 94.48±15.44, indicating that college students have a good prosocial tendency. For self-esteem, the overall score ranges from 10 to 40. In this study, the self-esteem score of college students was 28.16±4.92, and the overall self-esteem level was OK. In terms of affective states, both positive and negative affections were scored on a scale of 10-50. The positive affection score was 32.07±7.27; The negative affection score was 26.13±7.53.

3.2 Correlation analysis of prosocial behavior, self-esteem and affective state of college students

In order to explore the relationship between prosocial behavior, self-esteem and affective state, a correlation analysis of the three was conducted (see Table 1). The results showed that prosocial behavior, self-esteem and positive affective were significantly positively correlated. There was no significant correlation between prosocial behavior and negative affective. There is a significant negative correlation between self-esteem and negative affective, and the correlation coefficient is -0.388. The correlation coefficient between positive affective and negative affective was 0.147. From this result, we can further analyze prosocial behavior, self-esteem and affective states, and explore the role of self-esteem in prosocial behavior and affective state.

**Table 1. The general status and correlation of prosocial behavior, self-esteem and affective state of college students (n=990)**

	Score(M±SD)	Prosocial Behavior	Self-Esteem	Positive Affection	Negative Affection
PB	94.48±15.44	1			
SE	28.16±4.92	0.217*	1		
PA	32.07±7.27	0.379**	0.418**	1	
NA	26.13±7.53	0.000	-0.388**	0.147*	1

\*Correlation is significant at the 0.05 level (2-tailed); \*\*Correlation is significant at the 0.01 level (2-tailed).

3.3 An examination of the mediating effect of self-esteem between prosocial behavior and affective state

The mediating analysis results of prosocial behavior, self-esteem and positive affection are shown in Table 2. The results showed that self-esteem played a partial mediating role in the influence of prosocial behavior on positive affection, and the mediating effect size was 20.208%.

**Table 2. Results of mediation analysis (n=990)**

	Positive Affective			Self-esteem			Positive Affective		
	B	p	β	B	p	β	B	p	β
Prosocial Behavior	0.178**	0.000	0.379	0.069**	0.000	0.217	0.142**	0.000	0.302
Self-esteem							0.521**	0.000	0.353
Adj R <sup>2</sup>	0.143			0.046			0.261		
F	F(1,988)=165.815,p=0.000			F(1,988)=48.967,p=0.000			F(2,987)=175.314,p=0.000		

\* p<0.05 \*\* p<0.01

The relationship between prosocial behavior, self-esteem and negative affection was analyzed by suppression effect. The results are shown in Table 3. Self-esteem has a suppression effect between prosocial behavior and negative affection.

**Table 3. Summary of suppression effect size results**

Item	c total effect	a	b	a*b	a*b (95% BootCI)	c' direct effect	conclusion
PB=>SE=>NA	0.000	0.069**	-0.624**	-0.043	-0.124 ~ -0.058	0.043**	Suppression Effect

\* p<0.05 \*\* p<0.01

Bootstrap type: Percentile bootstrap method

4. Discussion

In this study, the prosocial behavior, self-esteem and positive affections of college students are at a relatively good level; Negativity is also at an acceptable level. These results are basically consistent with those of previous studies.

The correlation analysis of this study showed that prosocial behavior, self-esteem and positive affections were significantly correlated. Specifically, the higher the prosocial behavior, the more the individual can feel their own value and the higher the level of self-esteem. There was a high positive correlation between self-esteem and positive affection. The higher the level of self-esteem, the higher the level of social recognition and acceptance, and thus the higher the level of positive affections. For the same reason there is a significant negative correlation between self-esteem and negative affections.

The mediating effect test shows that self-esteem plays a mediating role in prosocial behavior and positive affection of college students. In mainstream culture and society, prosocial behavior is advocated and encouraged. Individuals can obtain the recognition of others and society through prosocial behavior, and can also influence self-evaluation through their own internalized social standards, that is, internal self-motivation. This study also suggests that increasing prosocial behaviors can improve self-evaluation and increase positive affective

states. The relationship between prosocial behavior, self-esteem and negative affection is relatively complex. The results of this study show that prosocial behavior can not directly reduce negative affections, and one possible reason is that self-esteem plays a suppression effect in this process. Since this study was carried out just after the outbreak was declared, various influences of the epidemic still obviously existed, and the negative affection comparison scale norm of college students in this study was also relatively higher, and the difference was statistically significant. These may affect the exploration of the relationship between prosocial behavior, self-esteem, and negative affections. Future studies could select a wider range of subjects and explore their relationships in scenarios more remote from the impact of the pandemic.

## 5. Conclusions

5.1 Prosocial behaviors of college students are significantly correlated with positive affections and not significantly correlated with negative affections.

5.2 College students' self-esteem plays a partially mediating role in the influence of prosocial behaviors on positive affections.

5.3 College students' self-esteem plays a suppression effect in the influence of prosocial behaviors on negative affections

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