

# The Effect of College Students' Resilience on Self-Consciousness: Based on the Mediation of Self-Esteem and Positive Affect

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**Abstract:** Exploring the effect of college students' resilience on self-consciousness can enrich the theoretical system of college students' mental health research, providing theoretical guidance and countermeasures for college students' psychological health education, further promoting college students to grow up and obtain sound personalities. This study takes self-esteem and positive affect as the mediators, and the related scales of resilience, self-consciousness, self-esteem, and positive affect as the research tool. 586 college students from three different types of universities in the Sichuan-Chongqing area are selected as the sample objects. The structural equation model is used for verification analysis and effect analysis, while the influence model of college students' resilience on self-consciousness is established, and the following conclusions are drawn: (1) college students' resilience has a direct positive effect on self-consciousness; (2) the resilience of college students has a positive effect on self-consciousness through the mediation of self-esteem and positive affect, and resilience has a strong direct positive effect on self-esteem; (3) enhancing college students' self-consciousness with the improvement of resilience as a pointcut is an important part of college students' psychological health education.

**Keywords:** resilience of college students; psychological health education; self-consciousness; self-esteem; positive affect; structural equation model

## 1. Introduction

The concept of resilience was first proposed in the 1970s. Due to the different research emphases and direction of different researchers on the tendency of resilience, the academic community has not yet formed a unified definition of it. Some researchers define resilience as the mental function of individuals to improve their mental health and recover to a good physical and mental state when they encounter or deal with difficulties and setbacks (Pelcovitz & Laitner, 2016). Other researchers believe that resilience is a dynamic process that individuals can adapt well in face of pressure and adversity (Luthar et al., 2000). Also, some researchers consider that resilience is a kind of individual personality psychological characteristic and is a kind of ability or quality (Terrill et al., 2016; Werner, 1995). Individuals with high resilience have rich psychological resources. They can mobilize and allocate psychological resources reasonably to deal with setbacks in the face of pressure, showing a good state of adaptation. The level of individual resilience is closely related to adaptability. The higher the level of resilience, the more effective the use of various resources to cope with difficulties, and the stronger the ability to control the external environment (Tian et al., 2015).

Self-consciousness refers to an individual's awareness of himself and the relationship between himself and the surrounding environment, including his existence, as well as his physical, psychological, and social characteristics (Rasheed et al., 2019). This concept has been relatively unified in the academic world. Self-consciousness is an advanced stage of the development of individual consciousness. It is a multi-dimensional and multi-level psychological structure system, including self-knowledge, self-experience, and self-control (Nie et al., 2014). The three components are interrelated and mutually restricted and exist uniformly in an individual's self-consciousness. Studies have proved that individuals with good self-consciousness can make a correct and reasonable understanding of themselves, and can regularly modify and regulate their thoughts, emotions, psychology, and behaviors. In the face of difficulties, their coping strategies are usually positive, and their psychological enduring capacity and anti-frustration ability are strong (Ghorbani et al., 2010).

College students are in the critical period of their academic, professional and personal development, faced with pressure from many aspects such as study, employment, daily life, and social contact (Galatzer-Levy et al., 2012). College students' resilience will have a positive impact on them when they encounter problems, and the level of resilience will also determine whether college students can overcome psychological obstacles smoothly (Hartley, 2011). Their growth process is the process of continuous improvement of resilience. Meanwhile, self-consciousness is closely related to college students' mental health, and the conflict of college students' self-consciousness is an important internal cause of various psychological problems of college students. The confusion of college students' self-consciousness, inaccurate self-positioning, as well as the challenges and pressures they face are easy to lead to psychological problems (Xia, 2011). It can be seen that resilience and self-consciousness are both important factors affecting college students' mental health.

At present, there are few pieces of research on the influence of college students' resilience on their self-consciousness, but it can still be found from a small number of research results that there is a close relationship between resilience and self-consciousness. College students are the important reserve army for the development of the country and society, and they bear the responsibility and mission of promoting social progress and development. Exploring the effect of college students' resilience on self-consciousness can enrich the theoretical system of college students' mental health research, providing theoretical guidance and countermeasures for college students' psychological health education, further promoting college students to grow up and obtain sound personalities, and to make a contribution to national construction and social development.

## 2. Hypothesis

Relevant research shows that there is a pairwise correlation between resilience, self-esteem, and self-consciousness (Fu et al., 2014). The psychological structure of resilience determines the duality of its individual factors and environmental factors, and self-esteem, as the most important protective factor of an individual, is highly correlated with resilience (Arslan, 2016). In addition, studies have shown that self-esteem is closely related to interpersonal relationships, and people with high self-esteem, even in negative situations, tend to make interpersonal relationships pleasant through cognitively beneficial interpretations (Murray et al., 2006) and are more likely to evaluate themselves and others positively (Kim et al., 2019). Resilience is described as an individual's dynamic and continuous development process, an ability to adopt a positive attitude and effective strategies in the face of adversity and pressure, including the development of self-consciousness. Many pieces of research on improving individual resilience have mentioned the cultivation of self-consciousness (Gazelle et al., 2015). Based on the summary and extraction of relevant research contents of resilience, self-esteem, and self-consciousness, the following hypotheses are established in the study:

Hypothesis 1 (H1): Resilience has a positive effect on self-consciousness

Hypothesis 2 (H2): Resilience has a positive effect on self-esteem

Hypothesis 3 (H3): Self-esteem has a positive effect on self-consciousness

Studies have shown that the individual and environmental factors of resilience include hope, optimism, and social support, and individuals with high resilience will be more optimistic and have a better attitude to face various traumatic events. Positive affect is clearly and directly associated with a variety of positive outcomes, such as higher self-esteem, life satisfaction, and good academic or job performance. Meanwhile, individuals with high self-esteem have positive feelings about their lives, such as happiness, vitality, security, and confidence in the future. In addition, positive affect can also help individuals to understand themselves more correctly and form positive self-awareness. Therefore, the following hypotheses are established in the study:

Hypothesis 4 (H4): Resilience has a positive effect on positive affect

Hypothesis 5 (H5): Self-esteem has a positive effect on positive affect

Hypothesis 6 (H6): Positive affect has a positive effect on self-consciousness

Based on the above H1-H6 hypotheses, a hypothetical model of the effect of college students' resilience on self-consciousness is established, as shown in Figure 1.

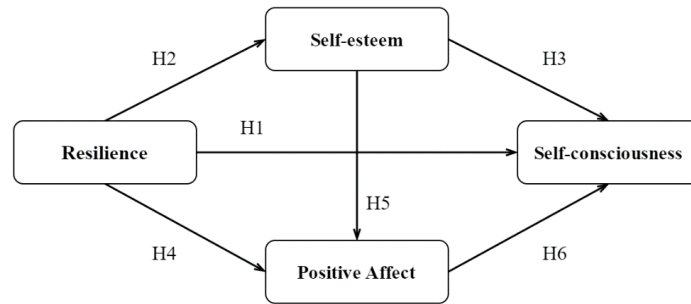


Figure 1: The hypothetical model

### 3. Methods

#### 3.1. Participant

The research adopts the method of cluster random sampling, with the psychological work units of multiple universities as the link, and selects the undergraduates of three different types of universities, including comprehensive, science and engineering, and teacher training, in the Sichuan-Chongqing area as the object of questionnaire survey. A total of 600 questionnaires are collected. After excluding invalid questionnaires with missing questions and regular answers, there are 586 valid questionnaires, with an effective rate of 97.7%. Among them are 291 boys (49.66%), 295 girls (50.34%); 136 freshmen (23.21%), 163 sophomores (27.82%), 157 juniors (26.79%), and 130 seniors (22.81%); 478 urban students (81.57%), 108 rural students (18.43%); 463 one-child children (79.01%), and 123 non-only children (20.99%).

#### 3.2. Measures

##### 3.2.1. Resilience

The current study adopts the 10-item Connor-Davidson Resilience Scale (CD-RISC-10). The original 25-item CD-RISC scale is used to assess resilience and the ability to face adversity. Campbell-Sills and Stein analyzed and verified based on the original CD-RISC scale, and proposed CD-RISC-10, which made the results of the scale more stable. The scale consists of 10 items, using Likert's 5-level scoring method, with a score of 1-5 indicating a range from "very disagree" to "very agree". In this study, the Cronbach's  $\alpha$  coefficient of the scale is 0.863.

##### 3.2.2 Self-consciousness

The Self-Consciousness Scale (SCS) compiled by Fenigstein (1975) is adopted in this study. There are 23 questions on the scale, which are divided into three dimensions, namely, private self-consciousness, public self-consciousness, and social anxiety. The scale uses Likert's 5-level scoring method, with a score of 1-5 indicating a range from "very disagree" to "very agree". The higher the total score of the scale, the stronger the self-consciousness. In this study, the Cronbach's  $\alpha$  coefficient of the scale is 0.958.

##### 3.2.3 Self-esteem

The original version of the Self-Esteem Scale (SES) was compiled by Rosenberg to assess an individual's overall feelings about self-worth and self-acceptance. The scale contains 10 items, 5 of which are reverse-scoring questions. Studies have shown that SES is a single dimension scale, but the design of reverse questions and the difference between Chinese and English translation will affect the dimension division of the scale in the result analysis, so the present study adopts the positive version SES proposed by Ellen Greenberger (2003). The scale uses Likert's 5-level scoring method, with a score of 1-5 indicating a range from "very disagree" to "very agree". In this study, the Cronbach's  $\alpha$  coefficient of the scale is 0.847.

##### 3.2.4 Positive affect

The Chinese version of the Positive and Negative Affect Scale was revised by Zhang(2004) on the original scale compiled by Bradburn. It contains 14 items, including 8 items for positive affect and 6

items for negative affect. This study selects 8 items on positive affect, using Likert's 5-level scoring method, with a score of 1-5 indicating a range from "very disagree" to "very agree". In this research, the Cronbach's  $\alpha$  coefficient of the scale is 0.827.

### 3.2.5 Statistical analysis

The software SPSS 23.0 and Amos 24.0 are used as statistical analysis tools. SPSS is used to complete reliability and validity tests, normality test analysis, and descriptive statistical analysis of data. On the premise that the reliability and validity of the questionnaire meet the requirements, using Amos combined with structural equation modeling (SEM) to verify and analyze the hypothetical model to determine whether the model fits well and whether the model assumptions are valid. In addition, the strength of the effects among the factors in the hypothetical model is also analyzed.

## 4. Result

### 4.1. Descriptive statistical analysis

Independent sample t-test and multivariate analysis of variance are used to study whether there are differences in the resilience, self-esteem, positive affect, private self-consciousness, public self-consciousness, and social anxiety of college students in different demographic characteristics. The results show that there are no significant differences in the scores of college students of different genders, different grades, and different origins in resilience, self-esteem, positive affect, private self-consciousness, public self-consciousness, and social anxiety ( $P > 0.05$ ), as shown in Table 1.

Table 1: Descriptive statistics for the variables ( $\bar{x} \pm s$ )

Factor	Gender			Origin of students			Grade				
	Male	Female	F	Urban	Rural	F	One	Two	Three	Four	F
PR	38.64±6.63	38.61±6.83	0.297	38.62±6.82	38.67±6.29	0.903	39.07±6.27	38.97±6.29	38.04±7.30	38.44±6.99	0.760
SE	38.09±6.52	38.13±6.63	0.018	38.06±6.59	38.31±6.50	0.095	38.22±6.22	38.82±5.44	37.62±7.41	37.68±7.12	1.126
PA	30.71±5.31	30.45±5.72	1.236	30.51±5.60	30.89±5.18	1.060	31.02±5.09	30.97±5.01	29.86±6.30	30.51±5.52	1.464
PrC	39.36±7.23	39.45±7.32	0.127	39.35±7.31	39.67±7.14	0.268	39.84±6.65	40.12±6.48	38.57±7.89	39.08±7.98	1.457
PuC	27.27±4.97	27.32±5.21	0.298	27.24±5.13	27.54±4.93	0.183	27.72±4.60	27.69±4.82	26.67±5.24	27.10±5.66	1.508
SA	22.92±4.23	22.49±4.33	0.584	22.69±4.41	22.79±3.68	3.027	23.04±3.92	23.03±3.97	22.28±4.66	22.45±4.52	1.264

Notes: PR, resilience; SE, self-esteem; PA, positive affect; PrC, private self-consciousness; PuC, public self-consciousness; SA, social anxiety.

### 4.2. Model validation

A structural equation model is established based on the hypothetical model of the effect of college students' resilience on self-consciousness. Amos is used to verify the model, and the maximum likelihood estimation method is used to estimate the parameters. The model fitting indicators are shown in Table 2.

Table 2: Model fitting indicators

Indicator	$\chi^2/df$	GFI	AGFI	CFI	NFI	RMSEA
Value	0.749	0.997	0.991	0.999	0.999	0.000
Criterion	$\leq 3$	$\geq 0.90$	$\geq 0.90$	$\geq 0.90$	$\geq 0.90$	$\leq 0.08$

Notes: CFI, comparative-fit index; GFI, goodness-of-fit index; AGFI, adjusted GFI; NFI, normed fit index; RMSEA, root mean square error of approximation.

Table 3: Path regression coefficients and significance testing

Path	Estimate	S.E.	C.R.
PR→SE	0.855***	0.021	39.863
PR→PA	0.443***	0.038	11.877
SE→PA	0.474***	0.039	12.701
PR→SC	0.418***	0.032	13.224
SE→SC	0.337***	0.033	10.574
PA→SC	0.265***	0.031	8.505

Notes: SC, self-consciousness; Estimates are standardized regression weights; \*\*\*  $p < 0.001$ .

Therefore, the validation model fitting effect of this study is excellent. In addition, the hypothetical

paths in the model need to be verified, and the path regression coefficients with significance testing (95% CI) obtained are shown in Table 3.

It can be discovered from Table 3 that resilience has a significant positive effect on self-esteem and positive affect ( $\beta=0.855$  and  $0.443$ ,  $P<0.05$ , respectively), and resilience also has a direct and significant positive effect on self-consciousness ( $\beta=0.418$ ,  $P<0.05$ ), so the hypotheses H1, H2, and H4 are supported. Self-esteem has a significant positive effect on positive emotion and self-consciousness ( $\beta=0.474$  and  $0.337$ ,  $P<0.05$ , respectively), so the hypotheses H3 and H5 are supported. In addition, positive affect has a significant positive effect on self-consciousness ( $\beta=0.265$ ,  $P<0.05$ ), so the hypothesis H6 is supported. All hypotheses in the present study are supported, and the verified structural equation model is shown in Figure 2.

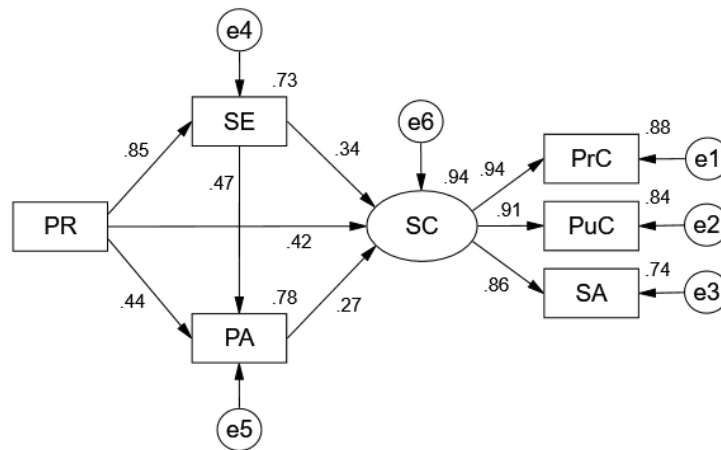


Figure 2: The verified structural equation model

It can be seen from Figure 2 that in addition to the direct influence paths of college students' resilience on self-consciousness, there also exist three influence paths including two Intermediary factors of self-esteem and positive affect, which are as follows:

- Path 1 (P1): resilience→self-esteem→self-consciousness
- Path 2 (P2): resilience→positive affect→self-consciousness
- Path 3 (P3): resilience→positive affect→self-esteem→self-consciousness

### 4.3. Mediation Analyses

In order to further verify the mediating role of self-esteem and positive affect in the model, boot-strap procedures are used to test the mediating effect, and the test results are shown in Table 4. Table 4 shows the indirect influence coefficients of the three influence paths of resilience on self-consciousness, as well as the 95% confidence interval. In Path 1, self-esteem has a significant mediating effect between resilience and self-consciousness ( $\gamma = 0.288$ ;  $p < 0.001$ ), so the mediating effect of self-esteem is supported. In Path 2, resilience indirectly affects self-consciousness significantly through positive affect ( $\gamma = 0.118$ ;  $p < 0.001$ ), so the mediating role of positive affect is supported. In Path 3, resilience first affects self-esteem, then self-esteem affects positive affect, and finally, positive affect affects self-consciousness, and the whole path is also significant ( $\gamma = 0.108$ ;  $P < 0.001$ ). Through the indirect influence coefficients of the three paths, it can be found that the influence coefficient of Path 1 is the highest, indicating that Path 1 is the key path for the influence of resilience on self-consciousness.

Table 4: Mediation test results

Path	Estimate effect	Percentile 95% CI		BC 95% CI	
		Lower	Upper	Lower	Upper
P1	0.288***	0.234	0.344	0.235	0.345
P2	0.118***	0.084	0.154	0.085	0.154
P3	0.108***	0.080	0.137	0.081	0.138
Total	0.514***	0.455	0.575	0.456	0.576

Notes: \*\*\*  $p < 0.001$

#### 4.4. Effect analysis

The influencing effects of various factors in the model of the effect of college students' resilience on self-consciousness include three parts: total effect, direct effect, and indirect effect. The direct effect refers to the path coefficient between two factors with a direct influence relationship, indicating the strength of direct influence. If two factors have an effect through one or more mediating factors, the two factors have an indirect effect. The total effect is the sum of the direct effect and the indirect effect. The standardization effect analysis results of this model are shown in Table 5.

Table 5: The standardization effect analysis results

	Factor	PR	SE	PA
Total Effect	SE	0.855		
	PA	0.849	0.474	
	SC	0.932	0.463	0.265
Direct Effect	SE	0.855		
	PA	0.443	0.474	
	SC	0.418	0.337	0.265
Indirect Effect	SE			
	PA	0.405		
	SC	0.514	0.126	

In terms of direct effect, resilience has a strong effect on self-esteem, with an effect coefficient of 0.855, and a relatively moderate effect on positive affect and self-consciousness, with 0.443 and 0.418, respectively. In terms of indirect effects, the effect coefficients of resilience on positive affect and self-consciousness are 0.405 and 0.514, respectively, and the degree of influence is moderate.

## 5. Discussion

### 5.1. The relationship between resilience and self-consciousness

Through the model of the effect of resilience on the self-consciousness of college students in this study, it can be found that resilience has both direct and indirect effects on self-consciousness, and the improvement of resilience will enhance the self-consciousness of college students. College students with a high level of resilience have more positive behavioral effects, and thus have a higher level of activity. They can give full play to their subjective initiative to think about the blows and difficulties encountered, actively seeking ways and methods to change the unfavorable status quo, devoting themselves to learning, scientific research, and other positive activities, so as to promote the increase of the self-evaluation and continue to self-verify in rational and objective self-evaluation to form positive self-knowledge, self-experience, and self-control. In this way, self-consciousness can be improved and an optimistic and confident mental health state can be shaped.

### 5.2. The mediating role of self-esteem and positive affect

The resilience of college students has a direct effect on self-esteem and positive affect, among which the direct effect on self-esteem is especially high. At the same time, resilience has an indirect effect on self-consciousness through self-esteem and positive affect. Individuals with high resilience can experience a higher level of self-esteem. Individuals with high self-esteem tend to have more positive self-evaluations, and they are more confident and optimistic to cope with difficulties. On the other hand, positive affect can be regarded as a significant characteristic of individuals with a high level of resilience, which is closely related to resilience. College students with a high level of resilience have more positive emotional characteristics, possessing a better mindset and an optimistic life state, and can find the positive side of things in adversity, while effectively regulating negative emotions. In this way, they then view themselves from a positive perspective, increasing their further knowledge and understanding of themselves with a positive and confident attitude, and ultimately enhancing their self-consciousness.

### 5.3. Suggestions and implications

Resilience and self-consciousness both are important indicators and components of college students'

mental health, which affect individuals' emotional state, social adaptation, and personal development. On the whole, the resilience of college students is relatively stable. However, some college students will have problems such as family changes, family difficulties, academic troubles, and major life blows. A few individuals will fall into an extremely negative state as a result, leading to depression, and seriously affecting physical and mental health and future development. Helping these people to rebuild their psychological defenses, to improve their level of resilience, and encourage them to effectively know themselves, deeply understand themselves, objectively evaluate themselves, correctly position themselves, and regain optimism to meet life challenges is the key content of psychological health education. Meanwhile, it is an important part of the psychological health education work of colleges and universities to improve the resilience level of the entire college student group, thereby promoting the overall improvement of college students' self-consciousness. Only when college students achieve self-reliance, self-confidence, self-control, and self-improvement in a psychological environment that fully understands themselves can they obtain a healthy mind and a sound personality, and enable them to fully feel happiness and satisfaction in their lives, so as to take the initiative to transform the expectations placed by the state and society into the driving force of national construction and social development.

## 6. Conclusions

This research aims to explore the impact of college students' resilience on self-consciousness. It uses self-esteem and positive affect as mediators, while the related scales of resilience, self-consciousness, self-esteem, and positive affect as research tools. The structural equation model is used to carry out verification analysis, mediation analyses, and effect analysis, and a model of the effect of college students' resilience on self-consciousness is constructed. The following conclusions are obtained:

(1) College students' resilience has a direct positive effect on their self-consciousness, and the increase of resilience will enhance their self-consciousness.

(2) The resilience of college students has a positive influence on self-consciousness through the mediation of self-esteem and positive affect, and resilience has a strong direct effect on self-esteem.

(3) Enhancing the self-consciousness of college students based on the improvement of the level of resilience is an important part of college students' psychological health education.

## Acknowledgement

The authors are grateful for the funding support of Chengdu Medical College Sichuan Applied Psychology Research Center (CSXL-22318), the Sichuan University Student Ideological and Political Education Research Center (CSZ20083), and sincerely thank Chen Lihong for supporting the distribution of questionnaires and data collection in this research.

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