

The Impact of Self-Control on Employment Anxiety among College Students: A Moderated Mediation Model

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Abstract

Background

Employment anxiety has become increasingly prevalent among college students as they face growing uncertainty and competition in the labor market. Self-control may play an important role in alleviating employment anxiety; however, the mechanisms underlying this relationship remain unclear. Therefore, the purpose of this study is to explore the impact of self-control on college students' employment anxiety and the role of negative employment cognitive evaluation and social support in this process.

Methods

Using self-control scales, diagnostic scales for college graduates' employment anxiety, social support scales, and scales for assessing negative employment cognitive evaluations among college students, a random sampling survey was conducted among 1,850 college students from four universities in China. The PROCESS plugin was employed to construct mediation and moderated mediation models to analyze the mediation effects and moderated mediation effects.

Results

(1) After controlling for factors such as grade, gender, subject type, and graduation plans, self-control significantly negatively predicted employment anxiety. (2) Negative employment cognitive evaluation played a mediating role in the relationship between self-control and employment anxiety. (3) Social support moderated the effect of self-control on employment anxiety.

Conclusion

To enhance individuals' employ-ability and mental health, we should emphasize the cultivation of their self-control abilities, while also providing sufficient social support to mitigate their negative employment cognitive evaluations and reduce employment anxiety.

1. Introduction

The Report to the 20th National Congress of the Communist Party of China emphasized the need to strengthen the employment-first policy, improve mechanisms for promoting employment, and advance high-quality and full employment. Against this policy background, facilitating the employment of university graduates has become an important priority within China's broader strategies for educational development and talent cultivation. According to the Ministry of Human Resources and Social Security of the People's Republic of China (2026), the number of university graduates in China is projected to reach 12.7 million in 2026, representing an increase of 480,000 compared with the previous year.

Within the Chinese context, intensifying competition in the labor market has made employment anxiety an increasingly salient issue among university students. Employment anxiety refers to a negative emotional state characterized by tension and unease arising from concerns about being unable to secure employment successfully or achieve desired career goals (Wanberg 2012). In recent years, employment-related mental health concerns have attracted growing scholarly attention. Existing evidence suggests that employment-related stress among university students is closely associated with adverse psychological outcomes, particularly symptoms of anxiety and depression (Peng et al. 2024; Linge & Kosnin 2024). Such negative emotional experiences may further contribute to sleep disturbances (Alvaro et al. 2013), thereby undermining university students' psychological well-being and daily functioning.

Previous research has primarily examined the mechanisms underlying employment anxiety from the perspective of external factors. Existing evidence suggests that employment anxiety is strongly shaped by labor market conditions. Labor market insecurity and unstable employment have been consistently associated with higher levels of psychological distress and fear of job loss (Voßemer et al. 2018). In addition, education–labor market mismatch, particularly overeducation and skill mismatch, has been identified as a key structural factor contributing to employment-related stress and anxiety (Bracke et al. 2014). More recent studies further indicate that the combination of precarious employment and overeducation significantly intensifies fear of job loss, highlighting the critical

role of structural labor market constraints in shaping employment anxiety (Sun 2026). Moreover, skill shortages and labor market imbalances exacerbate uncertainty in the job-matching process, thereby increasing anxiety among job seekers (Dawson et al. 2020).

Although some studies have explored the determinants of employment anxiety from different perspectives and have begun to consider individual-level factors, such as career-related competencies and self-regulatory capacity (Kanfer & Heggstad 1997; Kim et al. 2019), existing research has largely examined internal psychological factors and external environmental influences in isolation, with limited attention paid to their interaction and integrated mechanisms (Kanfer et al. 2001). Previous studies have suggested that job-search behaviors and employment outcomes are jointly shaped by individual characteristics, self-regulatory capabilities, and labor market contexts (Wanberg 2012). However, a comprehensive understanding of how these factors interact across multiple levels to influence employment anxiety remains underdeveloped (Da Motta Veiga et al. 2018).

The limitations of the existing literature suggest that the development of employment anxiety cannot be fully explained by the independent effects of external labor market conditions or individual capabilities alone. Rather, it is likely to arise from the interaction between these factors through cognitive and psychological processes. Therefore, a more integrated perspective is needed to advance understanding of the underlying mechanisms through which employment anxiety develops.

Against this background, the present study focuses on the psychological mechanisms underlying employment anxiety among university students. Specifically, it examines how self-control influences employment anxiety through cognitive pathways, with particular attention to the mediating role of employment cognitive appraisal and the potential moderating role of social support. Accordingly, this study addresses the following research questions: (1) Does self-control significantly reduce employment anxiety? (2) Is this relationship mediated by employment cognitive appraisal? (3) Does social support moderate the strength of this relationship?

Self-regulation theory suggests that self-control is a core cognitive and behavioral capacity that enables individuals to regulate impulses, sustain goal-directed behavior, and adapt to environmental demands (Ryan & Deci 2000; Baumeister et al. 2007). From this theoretical perspective, individuals with higher self-control are more capable of regulating emotional responses and managing stress effectively. Empirical evidence further indicates that trait self-control is associated with better psychological adjustment and lower negative affect, including anxiety and stress-related outcomes (Tangney et al. 2004; Hofmann et al. 2014). Moreover, meta-analytic findings suggest that self-control plays a critical role in adaptive coping and health-related behaviors under stress (de Ridder et al. 2012). Therefore, self-control can be considered a protective factor against employment anxiety, such that higher levels of self-control are associated with lower levels of employment-related anxiety. Based on the above theoretical and empirical evidence, we propose the following hypothesis:

Hypothesis 1

(H1). Self-control negatively predicts the level of employment anxiety among college students.

Furthermore, self-control not only directly influences emotional states but also shapes cognitive appraisal processes in employment contexts. According to Cognitive Appraisal Theory, individuals evaluate potential stressors based on their perceived controllability and personal relevance, and these appraisals subsequently determine their emotional responses (Lazarus & Folkman 1984). Individuals with higher levels of self-control are more likely to engage in rational and adaptive cognitive processing, enabling them to interpret employment-related situations in a more positive and constructive manner (Fujita 2011). In contrast, those with lower levels of self-control are more likely to exhibit maladaptive cognitive appraisals, including self-doubt, uncertainty, and cognitive biases, all of which have been linked to heightened anxiety (Beck & Clark 1997). Accordingly, negative employment cognitive appraisal may serve as an important psychological mechanism through which self-control influences employment anxiety.

Based on this reasoning, we propose the following hypothesis:

Hypothesis 2

(H2). Negative evaluations of employment cognition play a mediating role between college students' self-control and their employment anxiety.

In addition to individuals' internal psychological mechanisms, external contextual resources may also influence this process. Social support refers to the emotional and instrumental resources provided by family members, friends, and broader social networks (Zhang et al. 2023). A growing body of research has shown that social support significantly reduces employment anxiety and plays an important role in employment-related psychological processes (Jiang 2024; Zhao 2023). The main-effect model and the buffering model of social support further suggest that social support not only directly promotes psychological well-being but also buffers the adverse effects of stressful life events (Schmiedl et al. 2022). This buffering effect has also been demonstrated in employment and occupational stress contexts, where social support mitigates the negative emotional consequences of stress (Khedhaouria et al. 2024).

From the perspective of self-regulation, social support can be regarded as an important external regulatory resource that enables individuals to cope more effectively with employment-related stress. Therefore, social support may moderate the relationship between self-control and employment anxiety. Specifically, when individuals perceive higher levels of social support, the protective effect of self-control against employment anxiety is expected to be strengthened, thereby attenuating the association between low self-control and high levels of employment anxiety.

Based on this reasoning, we propose the following hypothesis:

Hypothesis 3

(H3). Social support plays a moderating role between college students' self-control and employment anxiety.

Through a review of the literature, Previous studies have mainly focused on exploring the predictors of employment anxiety from either external or internal factors alone or analyzing the degree of employment anxiety among college students, with few studies analyzing the relationship between self-control and employment anxiety as well as the impact of their internal connections.

Taken together, the present study proposes a moderated mediation model in which self-control indirectly influences employment anxiety through negative employment cognitive appraisal, while social support moderates the direct relationship between self-control and employment anxiety (as shown in Fig. 1). By integrating internal self-regulatory mechanisms with external social support resources, this framework provides a more comprehensive and multidimensional perspective for understanding the development of employment anxiety among university students.

2. Objects and Methods

2.1. Research Objects

The study focuses on the college student population. Through the platform of Wenjuanxing, questionnaires were distributed to college students in several universities in China. A total of 1,933 questionnaires were collected. A total of 83 invalid responses were excluded based on attention-check items, excessively short completion time, and substantial missing values, yielding a final valid sample of $N = 1850$, with an effective response rate of 95.71%. Based on the 1,850 valid questionnaires collected, data analysis was conducted. Among them, there were 780 male cases, accounting for 42.16% of the total sample; and 1,070 female cases, accounting for 57.84% of the total sample.

2.2. Tools

2.2.1. Questionnaire on Negative Employment Cognitive Evaluation

The study employs the Negative Evaluation Subscale of the College Students' Employment cognitive Evaluation Questionnaire revised by Liu Hong (2011) to assess the level of negative employment cognition among college students. The negative evaluation dimension consists of six items. All items adopt a Likert five-point scoring system (1 = Completely Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Completely Agree). The participants are required to select one of the five options for each item according to their actual situation. The higher the total score, the higher the level of negative employment cognitive evaluation. In this study, the Cronbach's α coefficient of this subscale is 0.823.

2.2. Employment Anxiety Diagnostic Questionnaire

The Employment Anxiety Diagnostic Questionnaire developed by Zhang (2005) was employed in this study. This questionnaire utilizes factor analysis to examine its structural validity, categorizing the dimensions of employment anxiety into emotional, cognitive, behavioral, and physiological aspects, as well as anxiety related to the employment process and employment outcomes. The questionnaire scores are calculated on a 4-point scale, with the sum of 30 items (The questionnaire contained two attention-check items; responses missing data on these two items were not used in subsequent data analysis) representing each participant's anxiety score. A higher score indicates a higher level of anxiety. The Cronbach's α coefficient of this questionnaire in this study is 0.980.

2.2.3. Self-Control Questionnaire

The self-control scale adopted in this study was originally developed by Tangney (2004) and later revised by Tan et al. (2008). This scale consists of 19 items, covering five dimensions: impulse control, healthy habits, resisting temptation, work focus, and entertainment moderation. The scale uses a Likert-type five-point scoring system (1 = Completely disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly agree). In this study, the Cronbach's α coefficient of this questionnaire is 0.882.

2.2.4. Social Support Questionnaire

The social support scale adopted in this study is a revised version of the Social Support Rating Scale developed by Xiao (1994). Individual inappropriate items were removed, resulting in a final total of 8 items. The evaluation indicators cover three dimensions: subjective support, objective support, and utilization of support. There are 2 items for objective support, 3 items for subjective support, and 3 items for utilization of support. The higher the total score of the scale, the more social support the individual receives. In this study, the Cronbach's α coefficient of the scale is 0.730.

2.3. Data Processing

In this study, SPSS version 27.0 was used for common-method bias testing, reliability analysis, descriptive statistics, and correlation analysis. Mediation and moderation effect analyses were performed using the SPSS PROCESS macro (Hayes & Scharkow 2013). The bias-corrected percentile Bootstrap method was used to test the significance of indirect effects. Specifically, Harman's single-factor test was adopted to examine common-method bias. Exploratory factor analysis extracted eight factors with eigenvalues greater than one. The first common factor accounted for 37.45% of the total variance, which was below the critical threshold of 40%. Consequently, no substantial common-method bias was detected in the present dataset.

3. Results

3.1. Correlation Analysis

To investigate the correlations among self-control, negative cognitive evaluation of employment, social support, and employment anxiety, this study conducted a Pearson correlation analysis. Before conducting correlation analyses, the normality of scores on each scale was examined. The results indicated that the absolute values of skewness ranged from -0.3 to 0.3, and those of kurtosis ranged from -0.2 to 0.8 across all variables, all satisfying the criteria of $|S| < 2$ and $|K| < 7$ (Kline 2023). Furthermore, given the sample size of $N = 1,850$, the central limit theorem ensures that the Pearson correlation results remain robust even in the presence of slight deviations from normality (Ghasemi & Zahediasl 2012).

The results revealed that: self-control was significantly negatively correlated with both negative cognitive evaluation of employment and employment anxiety ($r = -0.412, p < 0.001$; $r = -0.539, p < 0.001$), while significantly positively correlated with social support ($r = 0.241, p < 0.001$); negative cognitive evaluation of employment was significantly negatively correlated with social support ($r = -0.144, p < 0.001$) and significantly positively correlated with employment anxiety ($r = 0.632, p < 0.001$); social support was significantly negatively correlated with employment anxiety ($r = -0.229, p < 0.001$). (See Table 1 for the results)

Table 1
Correlation Analysis result

1. Self-Control	<i>M</i>	<i>SD</i>	Skewness	Kurtosis	1	2	3
	3.177	0.571	0.274	0.518	1		
2. Negative Employment Cognitive Evaluation	3.175	0.743	-0.273	0.734	-0.412***	1	
3. Social Support	3.516	0.898	0.051	-0.137	0.241***	-0.144***	1
4. Employment Anxiety	2.590	0.667	-0.198	0.096	-0.539***	0.632***	-0.229***
Note: <i>N</i> = 1850, * <i>p</i> <0.05, ** <i>p</i> <0.01, *** <i>p</i> <0.001.							

3.2. Mediation Model Testing

To explore the role of negative employment cognition in the influence of self-control on college students' employment anxiety, this study, following the perspective of Wen (2014) on the establishment of mediation models, employed Model 4 in the PROCESS plugin developed by Hayes (2013) for SPSS to conduct mediation model testing. Prior to analysis, all variables were standardized. With grade, gender, discipline type, and graduation intentions controlled, this study analyzed self-control as the independent variable, employment anxiety as the dependent variable, and negative employment cognition as the mediating variable. As shown in Table 2, self-control significantly negatively predicted employment anxiety ($\beta = -0.539$, $t = -27.723$, $p < 0.001$), verifying Hypothesis 1. After incorporating the mediating variable, self-control still significantly negatively predicted negative employment cognition ($\beta = -0.411$, $t = -19.455$, $p < 0.001$). Self-control had a negative predictive effect on employment anxiety ($\beta = -0.340$, $t = -18.723$, $p < 0.001$), while negative employment cognition positively predicted employment anxiety ($\beta = 0.485$, $t = 26.591$, $p < 0.001$).

Table 2
Mediation Effect Analysis

Outcome Variable	Predictive Variable	<i>R</i>	<i>R</i> ²	<i>F</i>	<i>df</i> ₁	<i>df</i> ₂	β	<i>SE</i>	<i>t</i>	<i>Boot LLCI</i>	<i>Boot ULCI</i>
Employment Anxiety		0.554	0.307	163.490***	5	1844					
	Grade						0.033	0.011	1.690	-0.003	0.039
	Gender						0.121	0.040	6.119***	0.167	0.324
	Discipline Type						0.012	0.018	0.599	-0.024	0.045
	Graduation Intentions						-0.032	0.010	-1.627	-0.034	0.003
	Self-Control						-0.539	0.020	-27.723***	-0.580	-0.503
Negative Employment Cognitive Evaluation		0.430	0.185	83.470***	5	1844					
	Grade						0.020	0.012	0.918	-0.012	0.033
	Gender						0.098	0.044	4.548***	0.113	0.283
	Discipline Type						0.029	0.019	1.362	-0.012	0.064
	Graduation Intentions						-0.069	0.010	-3.252**	-0.054	-0.013
	Self-Control						-0.411	0.021	-19.455***	-0.454	-0.371
Employment Anxiety		0.707	0.499	306.257***	6	1843					
	Grade						0.024	0.009	1.419	-0.005	0.031
	Gender						0.074	0.034	4.355***	0.082	0.217
	Discipline Type						-0.002	0.015	-0.140	-0.032	0.028
	Graduation Intentions						0.002	0.008	0.100	-0.015	0.017
	Self-Control						-0.340	0.018	-18.723***	-0.377	-0.306
	Negative Employment Cognitive Evaluation						0.485	0.018	26.591***	0.449	0.521
Note: <i>N</i> = 1850, * <i>p</i> <0.05, ** <i>p</i> <0.01, *** <i>p</i> <0.001.											

In addition, the results of the mediation effect analysis are shown in Table 3. Among them, the 95% confidence intervals of the mediation paths do not include 0, indicating that the mediation effect is statistically significant. Specifically, there is a significant mediating effect of negative employment cognitive evaluation on the relationship between self-control and employment anxiety ($\beta=-0.199$, *SE* = 0.016, 95%*CI* [-0.232, -0.168]), verifying Hypothesis 2. The effect of the mediation path accounts for 36.920% of the total effect.

Table 3
Bootstrap Test for Mediation Effect Analysis

Total Effect	β	Boot SE	Boot LLCI	Boot ULCI	effect ratio(%)
	-0.539	0.020	-0.580	-0.503	100%
Direct Effect	-0.340	0.018	-0.377	-0.306	63.080%
Indirect Total Effect	-0.199	0.016	-0.232	-0.168	36.920%
Note: Boot SE (the standard error of indirect effects estimated by the bias-corrected percentile Bootstrap method). Boot LLCI (lower limit of the 95% confidence). Boot ULCI (upper limit of the 95% confidence).					

3.3. Testing the Moderated Mediating Model

To validate the moderated mediation effect, the study also conducted a test under the control of variables such as grade, gender, subject type, and graduation intentions.

Using Model 5 from PROCESS, an SPSS macro program developed by Hayes (2013), our analysis of Model 5 (Social support variables are added on the basis of model 4) revealed that both self-control and social support significantly negatively predicted employment anxiety ($\beta = -0.325$, $t = -17.495$, $p < 0.001$; $\beta = -0.089$, $t = -5.206$, $p < 0.001$). Additionally, negative employment cognitive appraisal significantly positively predicted employment anxiety ($\beta = 0.481$, $t = 26.518$, $p < 0.001$). Notably, the interaction term between self-control and social support significantly positively predicted employment anxiety ($\beta = 0.035$, $t = 2.415$, $p < 0.05$). This suggests the existence of a moderated mediation effect in the relationship between self-control and employment anxiety. (See Table 4 for the results)

Table 4
Analysis of Moderated Mediation Effect

Outcome Variable	Predictive Variable	R	R ²	F	df1	df2	β	SE	t	Boot LLCI	Boot ULCI
Employment Anxiety		0.713	0.508	237.533***	8	1841					
	Grade						0.005	0.009	0.519	-0.013	0.023
	Gender						0.161	0.034	4.725***	0.094	0.228
	Discipline Type						-0.006	0.015	-0.368	-0.035	0.024
	Graduation Intentions						-0.001	0.008	-0.165	-0.017	0.015
	Self-Control						-0.325	0.019	-17.495***	-0.362	-0.289
	Negative Employment Cognitive Evaluation						0.481	0.018	26.518***	0.445	0.517
	Social Support						-0.089	0.017	-5.206***	-0.123	-0.056
	Self-Control*Social Support						0.035	0.014	2.415*	0.007	0.063

Note: N = 1850, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Further simple slope analysis revealed that for participants with lower levels of social support (M-1SD), self-control had a significant negative predictive effect on employment anxiety (simple slope = -0.360, $t = -14.712$, $p < 0.001$). For participants with higher levels of social support (M+1SD), the predictive effect of self-control on employment anxiety was also significant (simple slope = -0.292, $t =$

-13.204, $p < 0.001$), but the slope for higher social support was steeper than that for lower social support (see Fig. 2). This suggests that as individuals' levels of social support increase, the negative predictive effect of self-control on employment anxiety becomes more pronounced (see Table 5).

Table 5
Direct effects at different levels of social support

Social Support	β	Boot SE	Boot LLCI	Boot ULCI
-0.996 (M-1SD)	-0.360	0.024	-0.408	-0.312
-0.017 (M)	-0.326	0.019	-0.362	-0.289
0.962 (M+1SD)	-0.292	0.022	-0.335	-0.249
Note: Boot SE (the standard error of indirect effects estimated by the bias-corrected percentile Bootstrap method). Boot LLCI (lower limit of the 95% confidence). Boot ULCI (upper limit of the 95% confidence).				

4. Discussion

With the rapid development of society and the intensification of competition, the increasingly severe employment pressure not only impacts individuals' mental health but also potentially triggers a range of behavioral and psychological issues (Baek et al. 2024). Consequently, this study endeavors to delve into the factors influencing employment anxiety from both external and internal perspectives, aiming to provide theoretical foundations and practical guidance for career counseling among university students.

First, this study found that self-control negatively predicts college students' employment anxiety, validating Hypothesis One. Specifically, individuals with stronger self-control abilities are better able to regulate their emotional investment and behavioral patterns. This finding aligns with previous research, suggesting that enhancing students' self-control abilities can effectively alleviate their employment anxiety (He et al. 2023; Zhang et al. 2024). The findings of this study demonstrate that self-control exerts an influence on employment anxiety, such that individuals with higher levels of self-control are better able to mitigate feelings of employment anxiety. This suggests that educators should pay attention to providing strategies to help college students cultivate abilities such as focus, impulse control, and resistance to temptation during the process of enhancing their cognitive understanding of themselves, their environment, and their careers, thereby improving their self-control. This, will be beneficial in reducing their levels of employment anxiety.

Secondly, the results of this study indicate that negative employment cognitive evaluation plays a mediating role between college students' self-control and employment anxiety, verifying Hypothesis 2. This finding suggests that individuals with lower self-control abilities are more likely to develop negative employment cognitive evaluations, which subsequently exacerbate their employment anxiety. In contrast, those with higher self-control abilities are better able to manage their emotions and behaviors, avoiding the formation of negative cognition and thereby reducing their employment anxiety. Consequently, individuals can improve their employment core competitiveness and job-seeking abilities by enhancing their levels of self-awareness, environmental awareness, and career awareness, and by adjusting their needs and plans in a targeted manner based on actual circumstances. This approach is beneficial for mental adjustment, healthy development, and the alleviation of employment anxiety.

Furthermore, the results of a moderated mediation analysis indicate that as the level of social support increases, the negative impact of college students' self-control on employment anxiety intensifies, suggesting that social support enhances the protective effect of self-control on college students' employment anxiety, which is consistent with previous theoretical perspectives (Feng & Zhang 2025; Feng et al. 2025). In the influence of self-control on employment anxiety, negative employment cognitive evaluation serves as a mediator, while social support can also moderate this influence process. This result indicates that when individuals face employment pressure, if they receive sufficient social support, their self-control ability will be strengthened, enabling them to better resist the formation of negative employment cognitive evaluations and subsequently reduce employment anxiety. Conversely, if social support is lacking, individuals' self-control ability may decline, making them more prone to forming negative cognition and exacerbating employment anxiety.

5. Limitations

Despite the meaningful findings yielded by this study, several limitations remain that need to be addressed and extended in future research. First, regarding variable selection, this study only examined the mechanisms through which self-control, negative employment cognitive evaluation and social support predict college students' employment anxiety. Other potential psychological and situational contributors to individuals' employment anxiety were not included in the analytical framework. Future investigations may enrich the theoretical framework by incorporating more mediating and moderating variables (e.g., psychological capital, career adaptability, perceived employment pressure), which can offer a fuller understanding of the intricate mechanisms driving college students' employment anxiety.

Second, concerning sampling, while our sample included college students from various grades, graduating students were under-represented. This may partly limit the generalizability of the results to graduate cohorts. Subsequent research should increase the number of graduating participants and balance sample representation across grade levels. An improved sampling strategy would yield more systematic and targeted empirical evidence, enabling a finer-grained analysis of employment-anxiety profiles for graduating students and supplying more reliable empirical support for universities' talent development and career-guidance initiatives.

Finally, this study adopted a cross-sectional research design, which cannot effectively reveal the dynamic causal relationships among the variables. Core variables including self-control, negative employment cognitive evaluation, and social support may change dynamically alongside individuals' psychological development and shifts in the macro employment environment. Therefore, future research may adopt a longitudinal follow-up research design. Through multi-wave data collection, researchers can accurately characterize the temporal patterns of variables and further uncover the dynamic developmental trends and causal associations among core variables.

6. Conclusion

In summary, this study explores the impact of self-control on employment anxiety among college students under severe employment pressure, as well as the role of negative employment cognitive evaluation and social support in this process. It has certain theoretical and practical significance for universities to better cultivate college students and inject outstanding talents into society. Although previous researchers have examined the relationship between self-control and employment anxiety, no study has yet explored the internal relationship between self-control and employment anxiety from the perspective of moderated mediation of negative employment cognitive evaluation and social support. In addition to investigating and assessing the current situation of college students' employment anxiety, this study also considers the impact of individual self-control level, negative employment cognitive evaluation, social support, and other factors on college students' employment anxiety. It establishes a psychological mechanism model of the influence of self-control on employment anxiety, explores the mediating and moderating variables that affect employment anxiety, and provides a solid scientific basis for the intervention research on alleviating college students' employment anxiety. It contributes to advancing the development of theoretical research related to employment anxiety and encourages universities to pay closer attention to the situation of college students' employment anxiety. Moreover, it encourages the government, society, and families to provide necessary support and assistance to college students, leveraging synergies in order to enhance the quality of college students' employment and achieve rational and optimal allocation of educational and social resources.

Declarations

Competing interests

The authors declare that they have no competing interests.

Ethical statements

This study was conducted in strict accordance with the Declaration of Helsinki. Furthermore, this research obtained ethical approval from the relevant institutional review board of the participating research institution. Verbal informed consent was obtained from all participants prior to survey administration.

Author Contribution

HY and YL designed the study. HY, GL, XL, XZ, LH collected data and performed the statistical analysis. HY, GL and YL wrote the first draft of the manuscript, HY, GL and YL finalized the manuscript. All authors contributed to the article and approved the submitted version.

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Data Availability

The supplementary files accompanying this article include ethical approval documentation, participant recruitment materials, the complete survey questionnaire, the cleaned valid analytical dataset (N=1850), full statistical output files, and the open-access web link used to generate the moderation plot. These supplementary materials are provided for peer-review via the journal submission system. The original unscreened raw dataset (N =1933) exported from the online questionnaire platform cannot be shared publicly, owing to the confidentiality policies of our partner schools concerning student information security and personal privacy protection. All statistical analyses presented in this manuscript were performed solely on the cleaned valid dataset (N =1850). Full data exclusion criteria are described within the manuscript and supplementary documentation.

References

1. Alvaro PK, Roberts RM, Harris JK (2013) A Systematic Review Assessing Bidirectionality between Sleep Disturbances, Anxiety, and Depression. *Sleep* 36(7):1059–1068. <https://doi.org/10.5665/sleep.2810>
2. Baek S-U, Won J-U, Lee Y-M, Yoon J-H (2024) Association between precarious employment and the onset of depressive symptoms in men and women: a 13-year longitudinal analysis in Korea (2009–2022). *Epidemiol Psychiatr Sci* 33:e25. <https://doi.org/10.1017/s2045796024000258>
3. Baumeister RF, Vohs KD, Tice DM (2007) The Strength Model of Self-Control. *Curr Dir Psychol Sci* 16(6):351–355. <https://doi.org/10.1111/j.1467-8721.2007.00534.x>
4. Beck AT, Clark DA (1997) An information processing model of anxiety: Automatic and strategic processes. *Behav Res Ther* 35(1):49–58. [https://doi.org/10.1016/S0005-7967\(96\)00069-1](https://doi.org/10.1016/S0005-7967(96)00069-1)
5. Bracke P, van de Straat V, Missinne S (2014) Education, mental health, and education-labor market misfit. *J Health Soc Behav* 55(4):442–459. <https://doi.org/10.1177/0022146514557332>
6. Da Motta Veiga SP, Turban DB, Gabriel AS, Chawla N (2018) From the unfolding process to self-regulation in job search: integrating between- and within-person approaches. *Res Personnel Hum Resour Manage* 36:241–272. <https://doi.org/10.1108/S0742-730120180000036007>
7. Dawson N, Rizoiu MA, Johnston B, Williams MA (eds) (2020) Predicting Skill Shortages in Labor Markets: A Machine Learning Approach. *IEEE International Conference on Big Data (Big Data)*; 2020 10–13 Dec. 2020. <https://doi.org/10.1109/BigData50022.2020.9377773>
8. de Ridder DT, Lensvelt-Mulders G, Finkenauer C, Stok FM, Baumeister RF (2012) Taking stock of self-control: a meta-analysis of how trait self-control relates to a wide range of behaviors. *Pers Soc Psychol Rev* 16(1):76–99. <https://doi.org/10.1177/1088868311418749>
9. Feng L, Zhang Q (2025) Relationship between proactive personality and career choice anxiety in college students: a mediated moderation model. *Int J Educ Vocat Guid*. <https://doi.org/10.1007/s10775-025-09730-w>
10. Feng Y-J, Zhang Z-Y, Wang W, Zhang W-J, Che G-W (2025) Chain-mediated effects of career self-efficacy and career planning between social support and career anxiety in college soccer players. *Front Psychol* 16–2025.

11. Fujita K (2011) On Conceptualizing Self-Control as More Than the Effortful Inhibition of Impulses. *Personality and Social Psychology Review.* ;15(2011)(4):352 – 66. <https://doi.org/10.1177/1088868311411165>
12. Ghasemi A, Zahediasl S (2012) Normality tests for statistical analysis: a guide for non-statisticians. *Int J Endocrinol Metabolism* 10(2):486–489. <https://doi.org/10.5812/ijem.3505>
13. Hayes AF, Scharkow. M (2013) The Relative Trustworthiness of Inferential Tests of the Indirect Effect in Statistical Mediation Analysis. *Psychological Science.* ;24(2013)(10):1918-27. <https://doi.org/10.1177/0956797613480187>
14. He M, Zhan X, Liu C, Li L, Zhao X, Ren L et al (2023) The relationship between self-control and mental health problems among Chinese university students. *Front Public Health* 11–2023. <https://doi.org/10.3389/fpubh.2023.1224427>
15. Hofmann W, Luhmann M, Fisher RR, Vohs KD, Baumeister RF (2014) Yes, But Are They Happy? Effects of Trait Self-Control on Affective Well-Being and Life Satisfaction. *J Pers* 82(4):265–277. <https://doi.org/10.1111/jopy.12050>
16. Jiang S, The Effects of Social Support on College Students' Employment Anxiety (2024) The Mediating Role of Psychological Capital. *Sci Social Res* 6(6):113–122. <https://doi.org/10.26689/ssr.v6i6.7348>
17. Kanfer R, Heggestad ED (1997) Motivational traits and skills: A person-centered approach to work motivation. *RESEARCH IN ORGANIZATIONAL BEHAVIOR*, VOL 19, 1997;19:1–56
18. Kanfer R, Wanberg C, Kantrowitz T (2001) Job Search and Employment: A Personality–Motivational Analysis and Meta-Analytic Review. *J Appl Psychol* 86:837–855. <https://doi.org/10.1037/0021-9010.86.5.837>
19. Khedhaouria A, Montani F, Jamal A, Hussain Shah M (2024) Consequences of technostress for users in remote (home) work contexts during a time of crisis: The buffering role of emotional social support. *Technol Forecast Soc Chang* 199:123065. <https://doi.org/10.1016/j.techfore.2023.123065>
20. Kim JG, Kim H, Lee K-H (2019) Understanding behavioral job search self-efficacy through the social cognitive lens: A meta-analytic review. *J Vocat Behav.* <https://doi.org/10.1016/j.jvb.2019.01.004>
21. Kline RB (2023) Principles and practice of structural equation modeling, 5th edn. Guilford Press, New York
22. Lazarus RS, Folkman S (1984) Stress, appraisal, and coping. Springer Publishing Company, New York
23. Linge D, Mohd Kosnin A (2024) Employment Anxiety among College Students During COVID-19: A Systematic Review. *Int J Acad Res Progressive Educ Dev* 13(1). <http://dx.doi.org/10.6007/IJARPED/v13-i1/20124>
24. Liu H (2011) Research on resilience, the employment mentality of university students and their relationship [master's thesis]. Soochow University
25. Ministry of Human Resources and Social Security of the People's Republic of China (2026 Apr) Two ministries roll out measures concerning the employment of 12.7 million college graduates. Ministry of Human Resources and Social Security of the People's Republic of China, p 25
26. Peng Y, Lv SB, Low SR, Bono SA (2024) The impact of employment stress on college students: psychological well-being during COVID-19 pandemic in China. *Curr Psychol* 43(20):18647–18658. <https://doi.org/10.1007/s12144-023-04785-w>
27. Ryan RM, Deci EL (2000) Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *Am Psychol* 55(1):68. <https://doi.org/10.1037//0003-066x.55.1.68>
28. Schmiedl A, Schulte E-M, Kauffeld S. The Demands-Buffering Role of Perceived and Received Social Support for Perceived Stress and Cortisol Levels:Hogrefe Publishing; 2022. 175–86 p. <https://doi.org/10.1027/2512-8442/a000110>
29. Sun H (2026) Pandemic anxiety and employment insecurity: how overeducation and precarious employment intensify fear of job loss in South Korea. *Humanit Social Sci Commun.* <https://www.nature.com/articles/s41599-026-07689-9>
30. Tan SH, Guo YY (2008) Revision of self-control scale for Chinese college students. *Chin J Clin Psychol* 16(5):468–. <https://doi.org/10.16128/j.cnki.1005-3611.2008.05.022>. 70
31. Tangney JP, Baumeister RF, Boone AL (2004) High Self-Control Predicts Good Adjustment, Less Pathology, Better Grades, and Interpersonal Success. *J Pers* 72(2):271–324. <https://doi.org/10.1111/j.0022-3506.2004.00263.x>
32. Voßemer J, Gebel M, Täht K, Unt M, Högberg B, Strandh M (2018) The Effects of Unemployment and Insecure Jobs on Well-Being and Health: The Moderating Role of Labor Market Policies. *Soc Indic Res* 138(3):1229–1257. <https://doi.org/10.1007/s11205-017-1697-y>

33. Wanberg CR (2012) The Individual Experience of Unemployment. *Ann Rev Psychol* 63 63, 2012):369 – 96.
<https://doi.org/10.1146/annurev-psych-120710-100500>
34. Wen Z, Ye B (2014) Analyses of mediating effects: the development of methods and models. *Adv Psychol Sci* 22(5):731–745.
<https://doi.org/10.3724/SP.J.1042.2014.00731>
35. Xiao S (1994) The theoretical foundation and research application of the Social Support Rating Scale. *J Clin Psychiatry* 4:98–100
36. Zhang B, Wang H, Mei R (2023) Relationship between social support and employment anxiety among art education students: self-efficacy as a mediator. *Social Behav Personality: Int J* 51(5):e12284. <https://doi.org/10.2224/sbp.12284>
37. Zhang M, Pan J, Shi W, Qin Y, Guo B (2024) The more self-control, the more anxious?— A network analysis study of the relationship between self-control and psychological anxiety among Chinese university students. *BMC Psychol* 12(1):648.
<https://doi.org/10.1186/s40359-024-02099-5>
38. Zhang XQ (2005) Predictors of employment anxiety among college graduates in Jiangsu Province [master's thesis]. Soochow University
39. Zhao A (2023) The impact of career expectation on employment anxiety of art students in higher vocational colleges during the COVID-19: A chain mediating role of social support and psychological capital. *Front Psychol* 14–2023.
<https://doi.org/10.3389/fpsyg.2023.1141472>

Figures

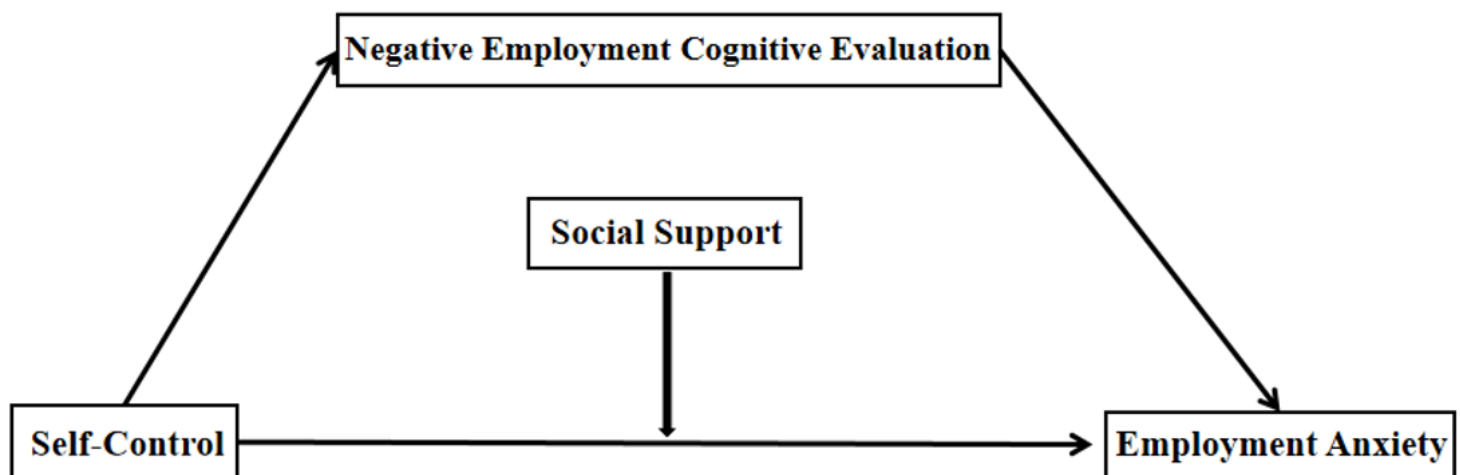


Figure 1

The hypothesized model diagram

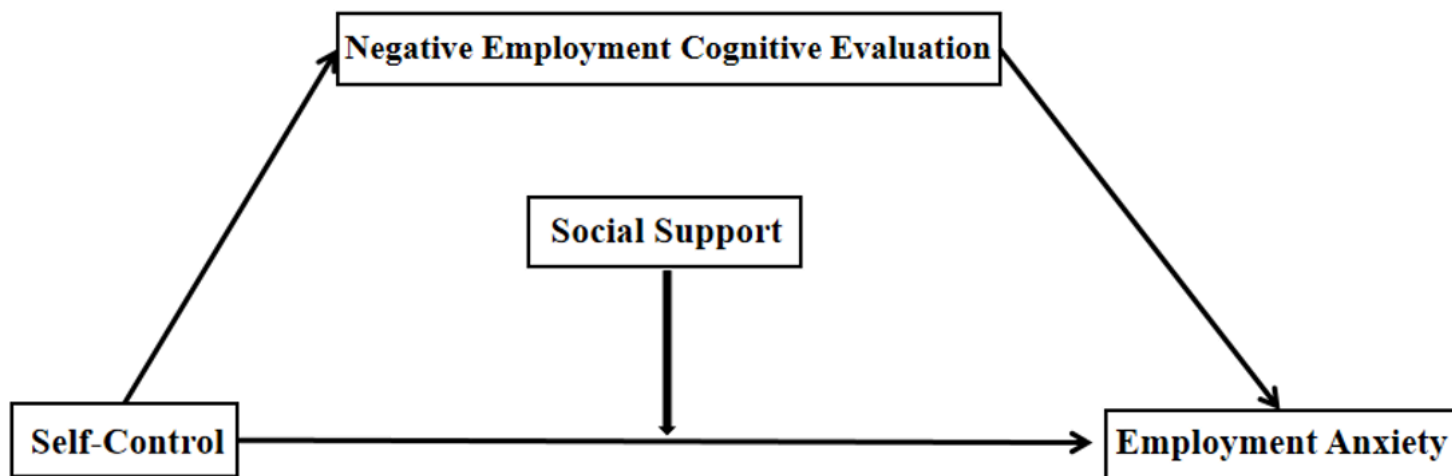


Figure 1

The hypothesized model diagram

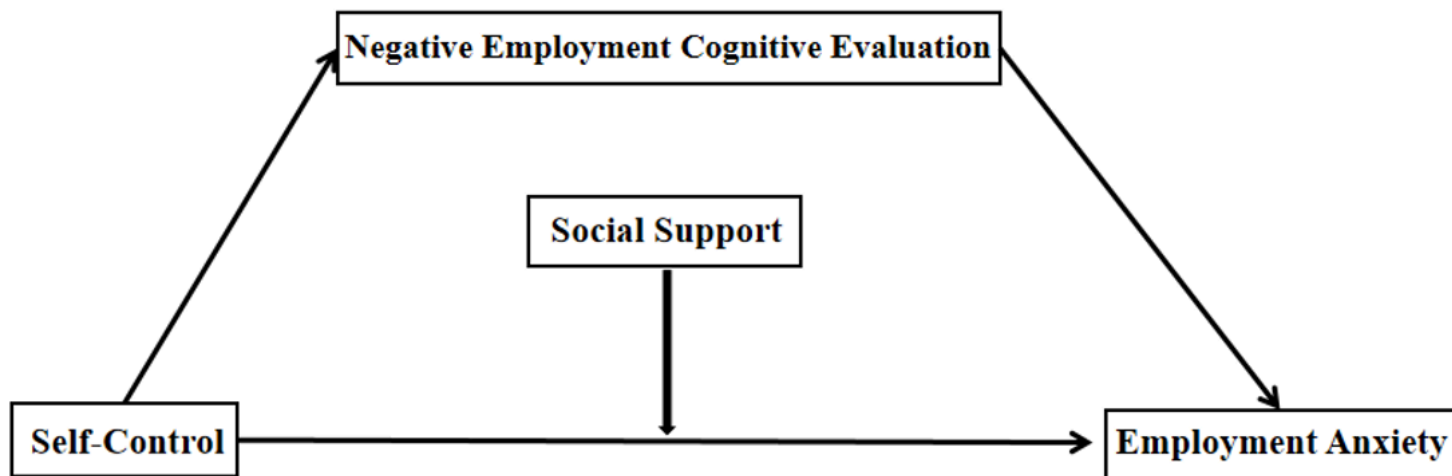


Figure 1

The hypothesized model diagram

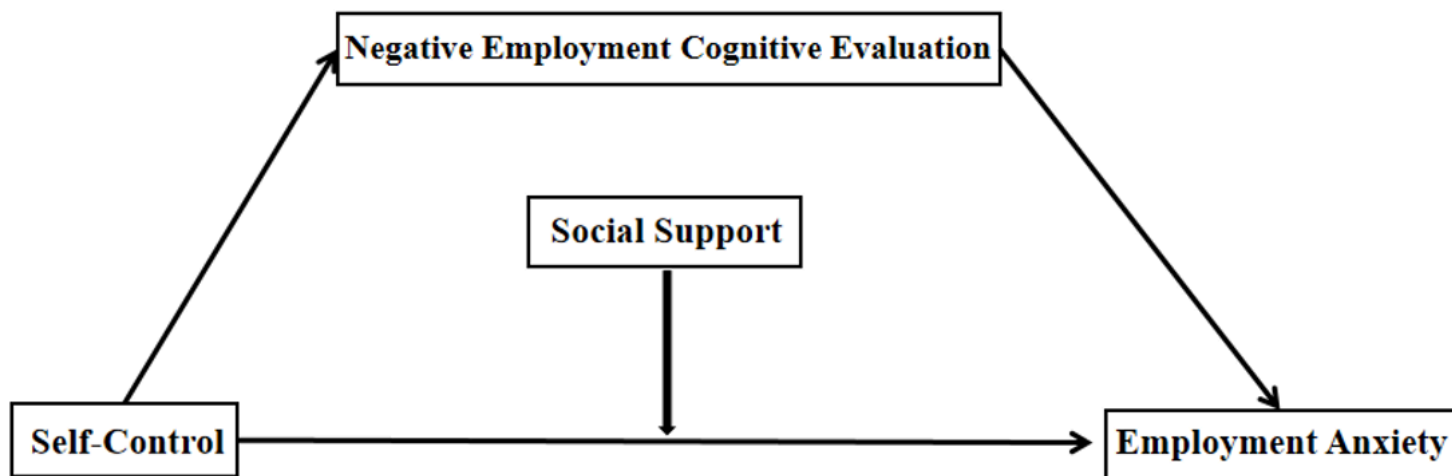


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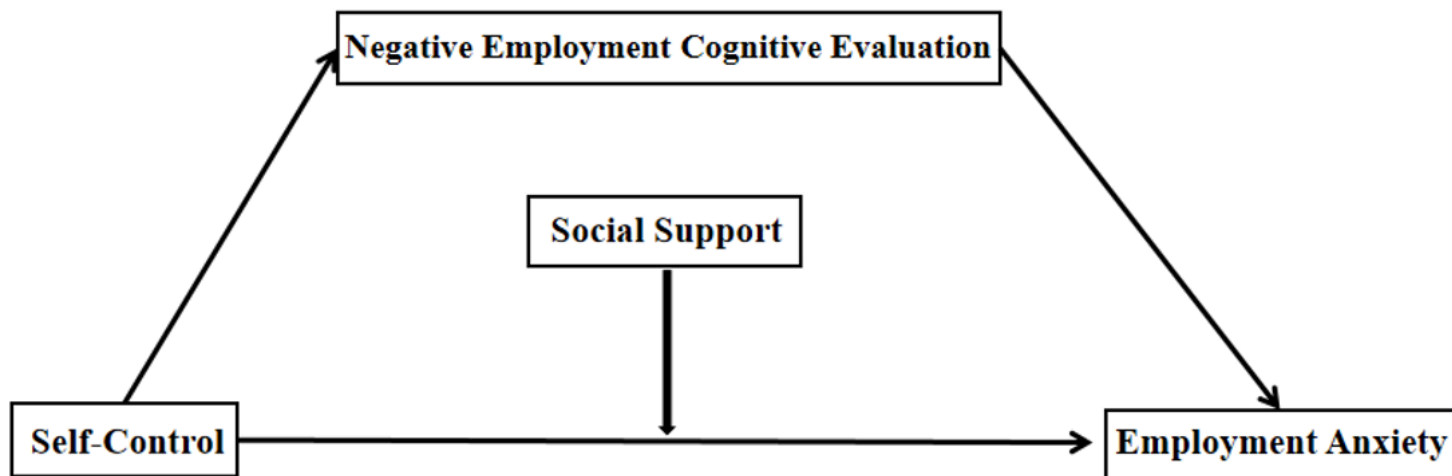


Figure 1

The hypothesized model diagram

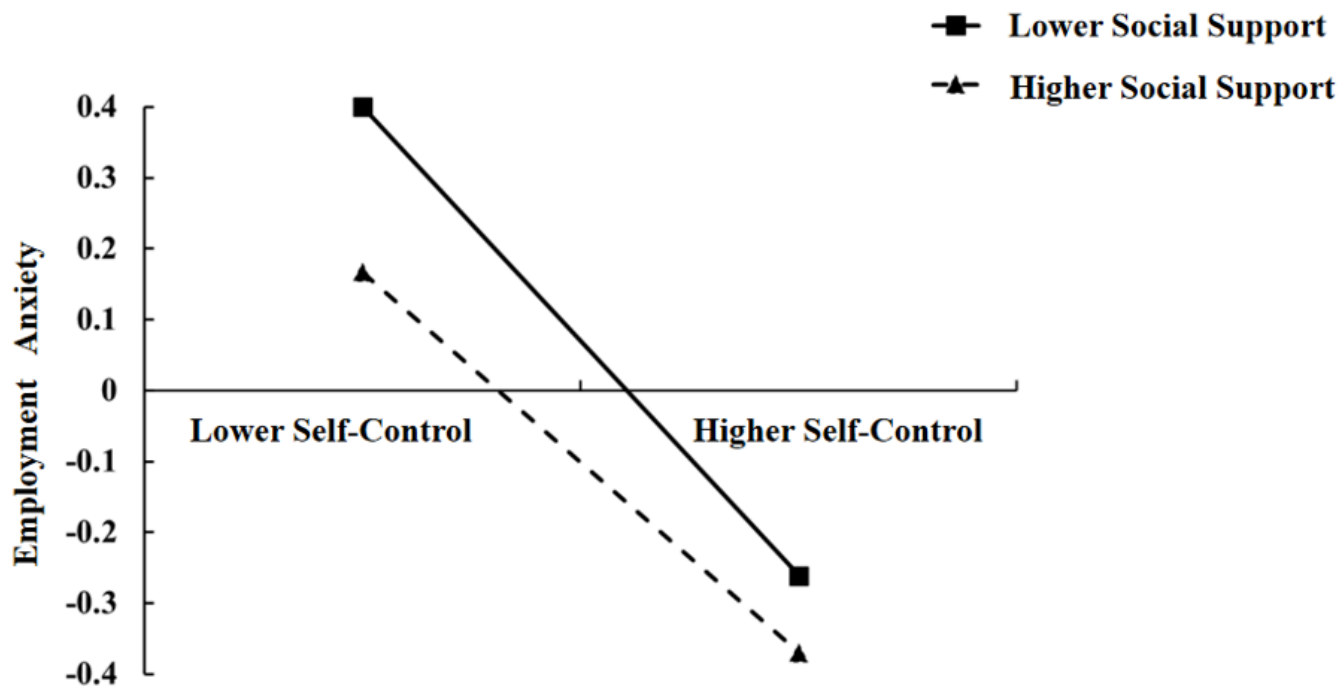


Figure 2

Moderating Effect of Social Support

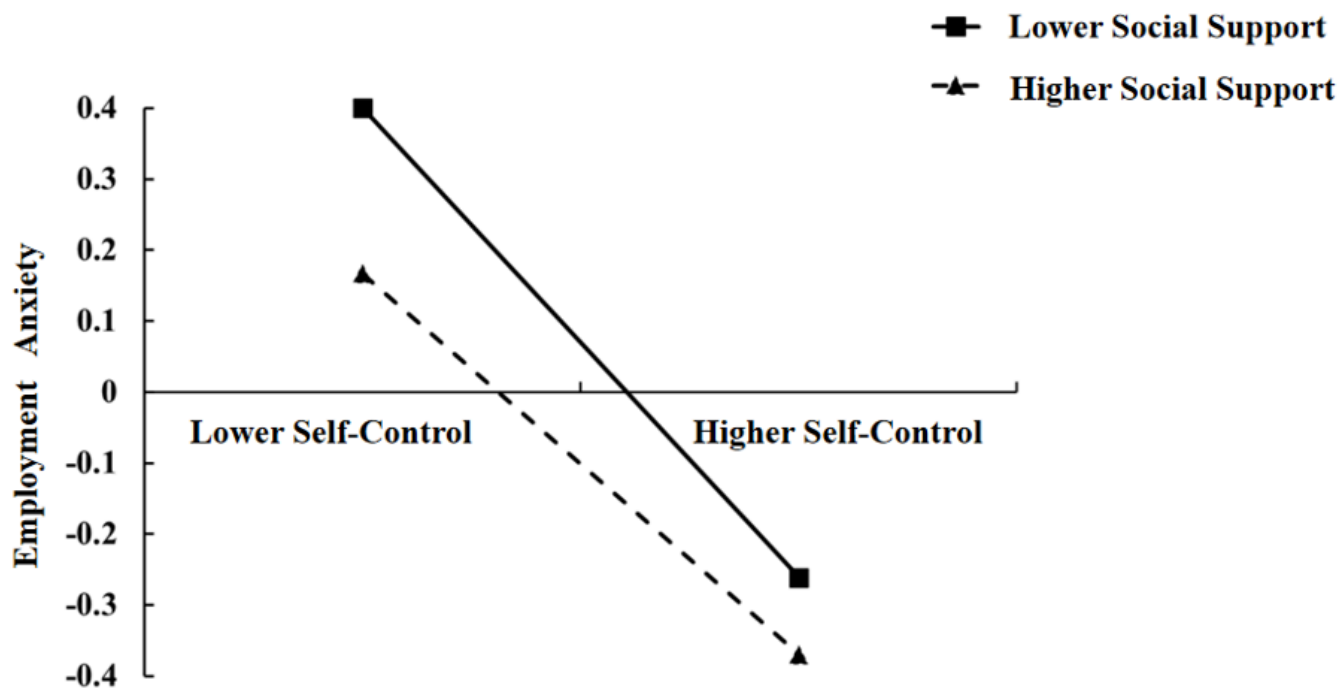


Figure 2

Moderating Effect of Social Support

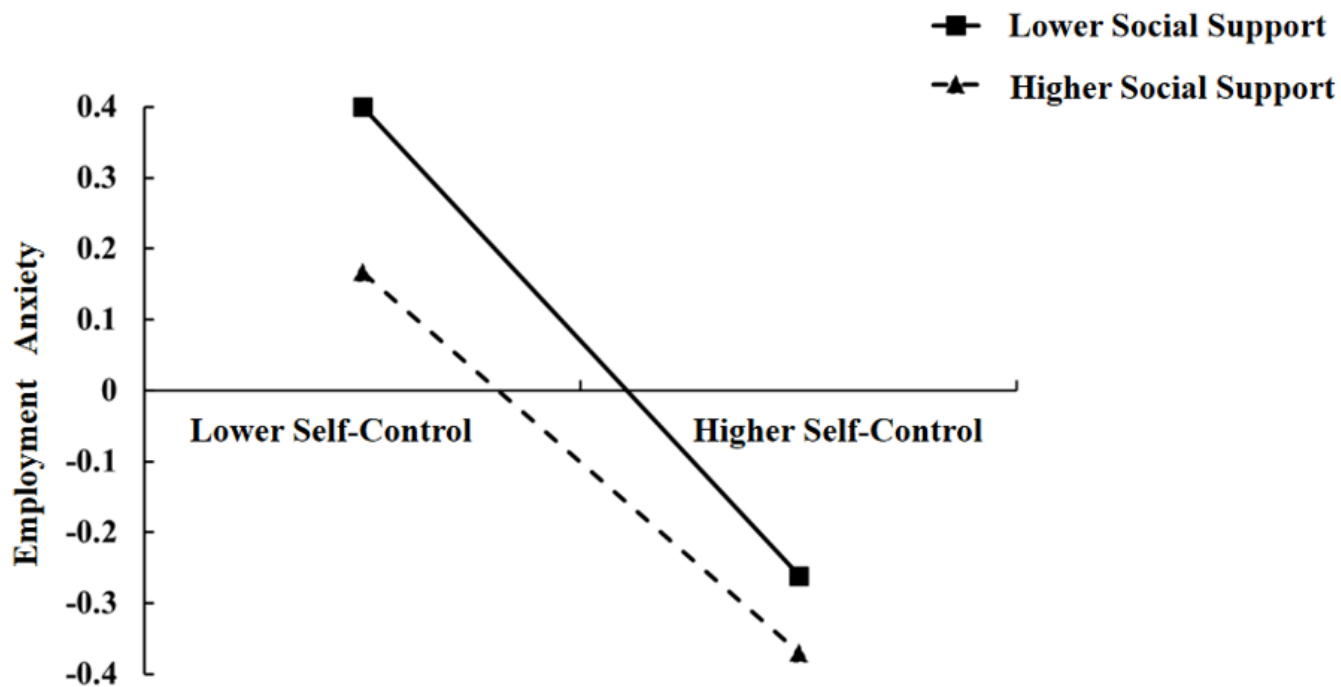


Figure 2

Moderating Effect of Social Support

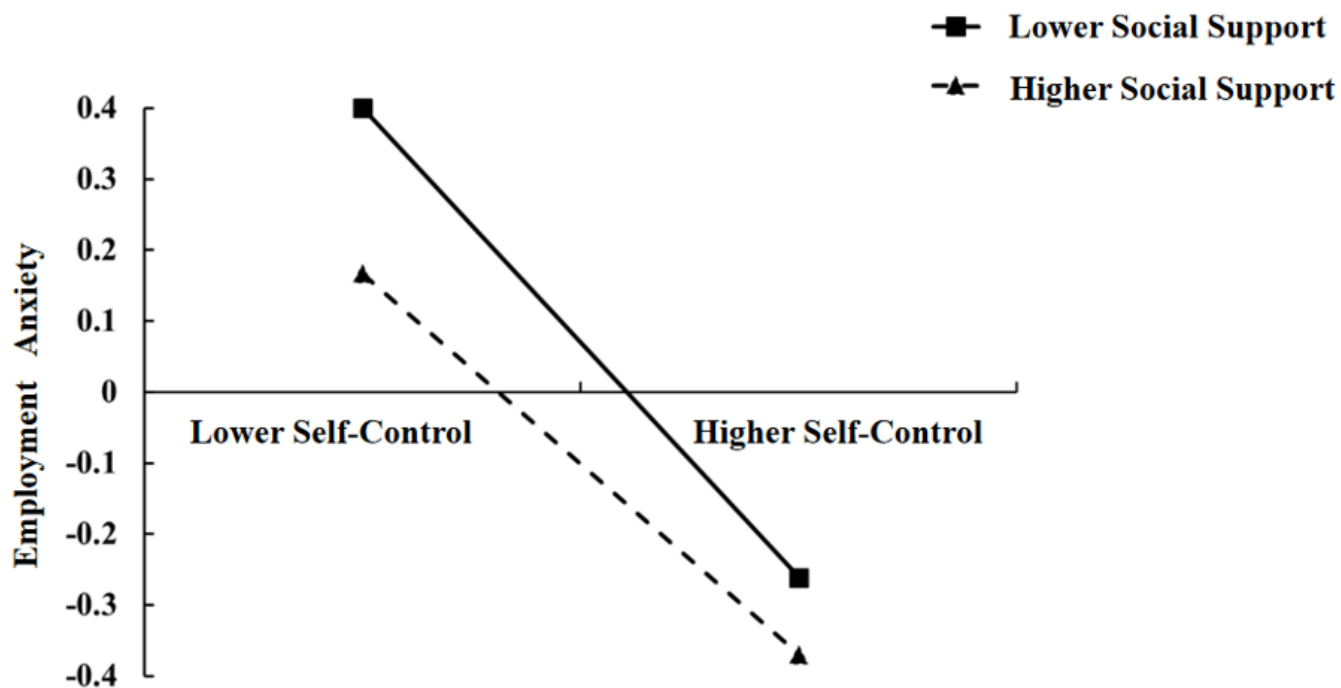


Figure 2

Moderating Effect of Social Support

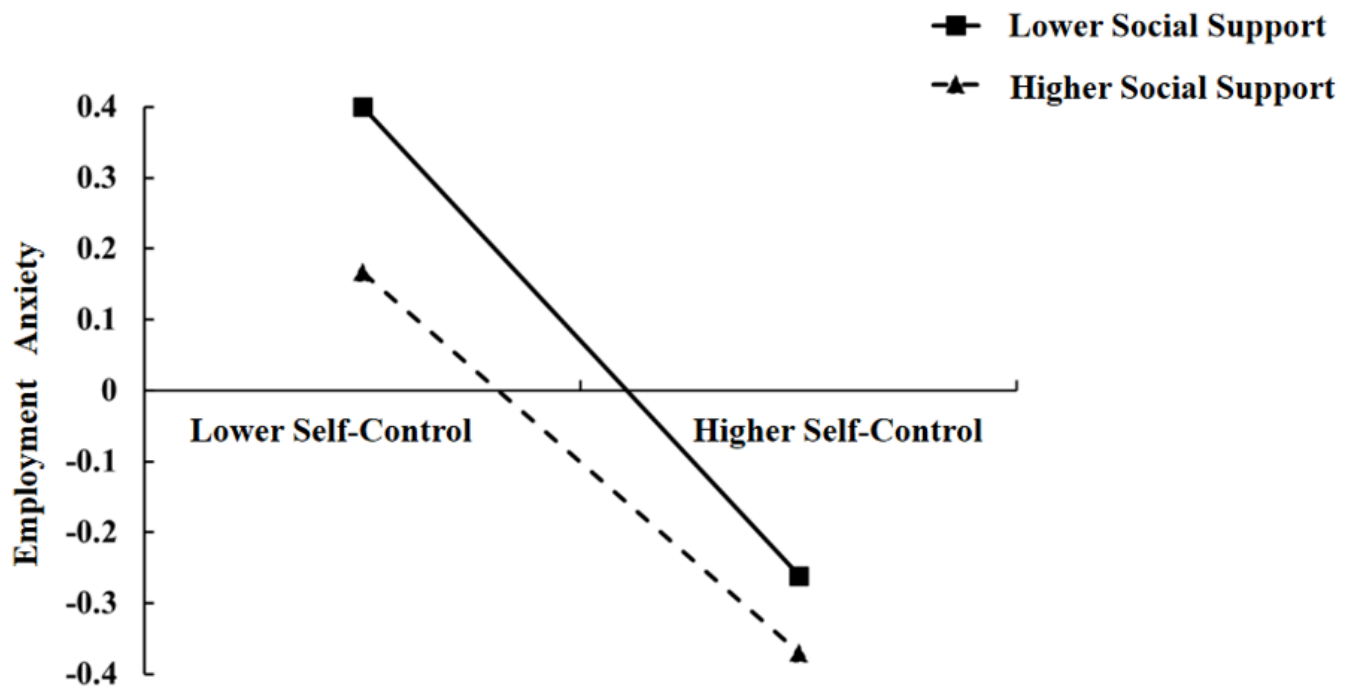


Figure 2

Moderating Effect of Social Support

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