

The Impact of Academic Justice Climate on Employability: What Role Does Psychological Security and Psychological Resilience Play?

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How to cite this paper: Qian, Z. C., Song, Q. H., Zhang, X. F., & Hou, Y. H. (2023). The Impact of Academic Justice Climate on Employability: What Role Does Psychological Security and Psychological Resilience Play? *Psychology*, 14, 709-727.
<https://doi.org/10.4236/psych.2023.145038>

Received: April 10, 2023

Accepted: May 19, 2023

Published: May 22, 2023

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Abstract

Drawing on the conversation of resource theory, this study investigated the relationship between academic justice climate and their employability. We considered the potential mediating role of researchers' psychological security and moderating role of their resilience. Using two-wave time-lagged data collected from 432 researchers in universities and research insinuations in China, we found that academic justice climate was positively related to researchers' employability via increased psychological security. Resilience alleviated the positive relationship between academic justice climate and psychological security, and the mediating effect of academic justice climate on employability through enhanced psychological security. We discuss the theoretical and practical implications of these findings in final.

Keywords

Academic Justice Climate, Employability, Psychological Security, Psychological Resilience, Researchers

1. Introduction

Numerous “tragedies” have occurred among researchers due to their perception of a justice academic climate. In early 2021, a doctoral student at a university in southwestern China committed suicide out of resentment towards their advisor and fellow students for their unfair treatment resulting in a tragic loss of life (Zhihu platform, which is a very popular social platform in China). In 2022, at a prestigious university in eastern China, another doctoral student spread rumors

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about their supervisors' unfair distribution of "scholarships" and made derogatory comments about the supervisors' privacy of an individual on the Internet, resulting in a series of negative reactions and ultimately leading to the student's expulsion from the PhD program. These examples illustrate that the justice academic climate not only affects researchers' attitudes towards academia, but also research evaluation and outputs. Without a justice academic climate, there can be no productive and effective research output, and it may even affect researchers' enthusiasm and dedication to their work. At present, there are few studies on academic justice climate in China, and the empirical studies are rare. There are only studies that have been conducted that focus on "the way researchers react to unfair treatment" (Tang, 2015). However, in China, the academic justice climate has been continuously affecting the physical and mental health, performance, etc. of researchers. Therefore, research on this issue deserves academic attention.

The perception of justice academic climate among team members, known as a fair atmosphere, is an essential factor that influences the attitudes and behaviors of team members (Li & Cropanzano, 2009) and is crucial in determining the retention of talent within an organization. This topic has been the focus of many scholars, who have devoted a significant amount of research efforts to it. Universities and research institutions serve as the foundation for academic exploration, composed of various scientific research departments. Each department is made up of several research teams and creates a research atmosphere dominated by mentors. A justice academic climate in the research environment refers to the fairness with which research team leaders assign work to their subordinates and share work or learning-related information, which fosters an environment in which researchers engage in scientific research activities. For research organizations, a justice academic climate provides a supportive environment that inspires researchers' work enthusiasm, significantly improving the research team's performance capabilities. This helps research team leaders maximize management efficiency and create greater scientific research output value for the team. In academia, the focus is often on exploring the relationship between a justice academic climate and performance, aiming to promote organizational efficiency effectively. However, there is little discussion about the impact of a justice academic climate on employees' employability, which is a crucial indicator of job skills. Therefore, does a justice academic climate in scientific research really affect employability? And if so, what is the mechanism behind it?

Through a literature review, it was discovered that a few studies have conducted exploratory investigations into the concepts of justice academic climate and employability. A survey found that procedural justice climate play a crucial role in identifying and effecting behavior and attitudes for different types of employees, such as a different quality leader-member exchange (LMX) relationships on, transactional leadership on work attitude (Lipponen, Koivisto, & Olkkonen, 2005; Haynie et al., 2014; Walumbwa, Cindy, & Bani, 2008). Prior research conducted a survey of restaurant employees, retail employees, and call center em-

employees in a hotel and found that when customers display interpersonal injustice towards hotel employees, the display of interpersonal fairness by the supervisor can greatly alleviate the negative emotions of hotel employees and reduce the occurrence of turnover due to emotional exhaustion (Van Jaarsveld, 2021). Besides, the procedural justice experienced by employees in their work can affect their state anxiety and thus affect their work dedication (Cloutier & Vilhuber, 2008; Hauenstein, Mcgonigle, & Flinder, 2001; Volmer, 2015). These research results preliminarily indicate that the justice academic climate may have an impact on employee behavior (Lee, Kim, & Yun, 2018; Gearhart et al., 2022; Peacock, 2022). In fact, these studies differ from the concept of employability, and the black box mechanism of the “justice academic climate impacts on employability” has not been fully explored.

Therefore, based on the conservation of resource theory, this study analyzes the impact mechanism of the justice academic climate in the scientific research environment on the employability of researchers. According to Forrier and Sels (2003)' definition, employability is the individual's perception of their likelihood of obtaining new employment. With the development of China's economy and society, China attaches more and more importance to the development of science and technology, and the research tasks of researchers are also increasing. However, limited by the limited number of job positions, employability has become an important foundation for the new relationship between employees and organizations. Employability can be divided into internal employability and external employability (Forrier & Sels, 2003; Wittekind, Raeder, & Grote, 2010). External employability refers to the opportunities in the external labor market and the individual's employment (job selection) ability to adapt to the external labor market (De Cuyper et al., 2012; De Cuyper & De Witte, 2010; Rothwell & Arnold, 2007). This study only focuses on external employability and emphasizes the characteristic of the possibility of obtaining new employment. This study aims to reveal the impact mechanism of the justice academic climate of scientific researchers on external employability, subverting the limitations of traditional research only on employee performance, and presenting more dialectical and novel thinking clues for the research on “justice academic climate and employability of scientific research”, while enriching and improving relevant empirical research.

2. Theoretical Background and Hypotheses

2.1. Academic Justice Climate and Employability

Justice climate is a collection of perceived fairness among members of an organization and is an important driving force for innovation among team members (Tangirala & Ramanujam, 2008; Rubino, Avery, & McKay, 2018). Justice climate refers to “a distinct group-level cognition about how a work group as a whole is treated” (Naumann & Bennett, 2000: p. 882). Academic justice climate is defined as a reflection of the justice climate in the academic environment. Academic jus-

tice climate is demonstrated by team leaders in their interactions with their members in research organizations, and it can increase trust and perceptions of identity among employees and with the organization, reducing employee stress and conflict (Li & Cropanzano, 2009). Perceived Employability (PE) is based on the subjective assessment of an individual's perception of the outcome of their likelihood of obtaining and maintaining employment (current or future) (De Cuyper & De Witte, 2010; Rothwell & Arnold, 2007; Forrier & Sels, 2003). This study argues that there is a strong positive relationship between the equity climate in which researchers work and perceived employability. A justice academic climate has a significant impact on researchers' employability. In a justice academic climate, researchers will have more opportunities to receive unbiased evaluations, including research funding, professional title assessments, and academic achievement evaluations. For Master's and PhD students, the most direct impact is ensuring they publish the required number of papers to graduate. Additionally, researchers have a better chance of obtaining better career development opportunities, leading to higher status and wider recognition in the research field. As they receive more funding, honors, and awards, along with more objective and fair academic evaluations, this enhances their employability and competitiveness. Furthermore, in a justice academic climate, researchers are more likely to pursue longer-term and stable career development paths in academia. In contrast, in an injustice academic climate, researchers may face career limitations, discrimination, and unfair evaluations, which can weaken their employability and competitiveness, and damage their academic prospects and career development.

The conservation of resource theory posits that organizations and individuals take a series of actions to protect the resources they possess, such as knowledge, skills, positions, and funds, through exchanges, coordination, and collaboration with others to ensure that their resources are maximized and utilized to the fullest extent. From the perspective of Conservation of Resources (COR), a justice academic climate can be regarded as a valuable resource, and only under such an atmosphere can researchers achieve maximum benefits. If the academic climate is fair, researchers can receive fair evaluations, balanced resources, and better career development opportunities. This enables them to effectively utilize their resources, attract more resources, and protect their own resources. The key to improving the research output of researchers lies in their research team receiving sufficient attention, respect, and guidance in terms of workflow, task allocation, information exchange, and interactive collaboration. When researchers perceive a lack of such resources, they will feel that their ability to acquire knowledge and skills is limited, that fresh knowledge cannot be injected into their existing knowledge system for a long time, and this can easily lead to knowledge disconnection, which then affects their employability. In other words, if the academic climate is injustice, researchers may face unfair evaluations and resource imbalances, which will limit their career development and reduce their competitiveness, thereby impeding their ability to utilize their re-

sources to obtain more development opportunities and resources. Based on this, this study proposes the following hypotheses:

Hypothesis 1: Academic Justice Climate is positively related to employability.

2.2. The Mediating Role of Psychological Security

Psychological security refers to employees' positive perceptions and judgments that the environment they are in is safe enough (Edmondson, 1999), all of which are footstone standing well-performing individual/teams (Hackman & Hackman, 2002; Blake et al., 2022; Greenbaum et al., 2020). Research has shown that employees who feel psychologically safe are better equipped to handle challenging job demands and this psychological environment has a significant positive impact on their job skills and employability (Plomp, Tims, Khapova, Jansen, & Bakker, 2019). In an environment where long-term employees feel psychologically safe, they can freely express their ideas without worrying or doubting that their words or actions might threaten their career development or position (Kahn, 1990). This goes some way to suggest that the psychological safety of workers has an impact on their increased employability. Employees with a sense of psychological security are able to express themselves freely and do not worry or suspect that their words or actions may pose a threat to their career development or the position they occupy. This study suggests that researchers' feelings of psychological security may increase their employability. Firstly, the conservation of resource theory suggests that individuals who experience a lack of resources or a mismatch between the amount of energy invested and the resources obtained will perceive a certain kind of stress, which in turn affects their behaviour (Hobfoll, 1989). Psychological security can be seen as a resource for individuals to remain engaged in their work, and when employees are relaxed and believe in the research organization, they will work hard in their own research direction, thus increasing the likelihood of employability. Secondly, researchers with a greater sense of psychological security usually have a more optimistic and positive self-evaluation of themselves and develop a more self-confident.

The justice academic climate in scientific research can provide a sense of psychological security for researchers to actively acquire project information, absorb project experience, and gain project-related skills. A justice academic climate enables members of a research group to properly share information and interact, and thus gain a sense of security in their project-related abilities. Moreover, a justice academic climate allows researchers to feel secure in information exchange by promoting active information sharing among research group members. In addition, researchers in a justice academic climate can enhance their psychological security by providing equal task distribution among group members, which is in line with the conservation of resource theory that individuals tend to maintain and acquire resources they value, such as autonomy, self-esteem, and social status. Hobfoll (2002) suggests that sufficient indi-

vidual resources can lead to positive evaluations of oneself and the external environment. In a research organization environment, researchers are curious and pursue the allocation of resources such as procedural resources, interactive resources, and information resources. The acquisition of these resources can enhance researchers' project-related skills, increase their confidence in scientific research, and ultimately provide them with a sense of personal psychological security, which is particularly important for undertaking uncertain and unfamiliar research tasks.

An academic justice climate enables researchers to gain advantages in accessing information about research projects, actively absorbing research project experience and gaining a sense of security in research project competence, and which allows subject members to share information interactions correctly and gain a sense of security in their research project capabilities. An academic justice climate helps researchers to gain a sense of security in their ability to interact with information by actively sharing information among subject members, and enables researchers to enjoy an equal division of tasks among subject members, thus enhancing their psychological security. According to conservation of resource theory, individuals tend to maintain and acquire resources that they perceive as valuable, such as autonomy, self-esteem and social status, etc (Xia et al., 2019; Asante et al., 2022; Xiang, Liu, Qiao, Gao, & Zhang, 2022). Hobfoll (2011) notes that adequate individual resources enable employees to have a positive perception of themselves and their external environment. In a research organization environment, researchers are curious about and pursue distribution resources, procedural resources, interactive resources, information resources, etc. The acquisition of these resources enables researchers to gain increased scientific competence, increased self-confidence to engage in scientific research, and thus a psychological sense of exclusive personal security at heart, which makes them more comfortable to engage in uncertain and unfamiliar scientific tasks. Based on this, this study proposes the following hypotheses:

Hypothesis 2: Researchers' psychological security is positively related to employability.

Hypothesis 3: Researchers' psychological security mediates the relationship of academic justice climate and employability.

2.3. The Moderating Role of Psychological Resilience

We think that psychological resilience can alleviate some of the negative consequences of external environment. Psychological resilience, also known as "mental hardness", is often defined as the ability to recover from negative experiences and to adapt to the environment. It helps employees to cope with the changing situations in their lives (Block & Kremen, 1996). In other word, resilience is the personal ability to recover quickly in an uncertain environment. Resilience is a dimension of psychological capital (Luthans, Luthans, & Luthans, 2004), which is demonstrated by a firm acceptance of reality, a belief in the meaning of life

supported by stable values, and an uncanny ability to cope temporarily and adapt to major changes, as well as career attitudes and behaviors, such as career commitment (Coutu, 2002; Luthans, Vogelgesang, & Lester, 2006; Jiang, Jiang, & Nielsen, 2021; Wong, Kost, & Fieseler, 2021).

Employees with high psychological resilience have enhanced adaptability to cope with dynamic environments, due to their abundant internal resources, thereby increasing their sense of psychological safety (Shin, Taylor, & Seo, 2012). In research environments where researchers are exposed to unfair treatment, those with greater psychological resilience can draw upon a greater amount of positive emotions and higher self-efficacy, thus strengthening their ability to resist psychological stress and promoting their sense of psychological safety. This enables them to focus more on their research work, be more motivated to explore new ideas, and strive for creative achievements (Shin, Taylor, & Seo, 2012). Conversely, in research environments where researchers are exposed to fair treatment, those with lower psychological resilience and lower psychological adjustment ability have lower resistance to psychological stress, resulting in lower psychological safety and reduced ability to focus on their research work. Based on this, this study proposes the following hypothesis:

Hypothesis 4: Psychological resilience positively moderates the direct effect of academic justice climate on psychological security, that is the higher psychological resilience, the stronger the direct effect.

Due to the enhancement of an academic justice climate, researchers' psychological safety is increased, which in turn leads to employability behaviors. Psychological safety plays an indirect role between a fair research environment and employability behaviors, functioning as a mediator. The effect of psychological safety on the impact of an academic justice climate on researchers is moderated by their psychological resilience. When psychological resilience is high, the positive effect of a fair research environment on researchers' psychological safety is weaker; when psychological resilience is low, the positive effect of a fair research environment on researchers' psychological safety is stronger. Therefore, this study suggests that psychological resilience moderates the indirect effect of psychological safety on employability behaviors. Based on this, this study proposes the following hypothesis (see Figure 1).

Hypothesis 5: Psychological resilience positive moderates the indirect effect of academic justice climate on employability through psychological security, that

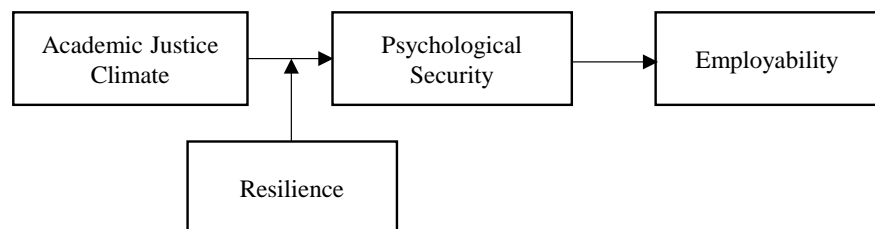


Figure 1. Research model.

is, when psychological resilience is higher, the indirect effect is stronger.

3. Method

3.1. Sample and Procedure

This study mainly collected data through questions, and the respondents were all with master's degree or above in universities and scientific research institutions in Beijing and Henan province. Before starting the research, we will contact with some postgraduates and doctoral candidates during individual relationship in university or research institutions in advance to briefly inform them of the research purpose and process. We persuaded them to help distribute our network survey questionnaire within their Wechat (a widely used social network app in China) group of their classmates or colleagues (snowball sampling) and handed out online money gifts to them and their Wechat group members as appreciation to improving the recovery rate of the questionnaire. In order to obtain reasonable and effective data, this study adopted a three-stage, multi-source paired sample survey. In this study, data of four variables of the research model were investigated in three times. Data of academic justice climate and age, gender, marital status, working situation and education were obtained in Time 1; data of psychological security was obtained in Time 2; data of employability and psychological resilience were obtained in Time 3. The three surveys were conducted three months apart to prevent the effect of time effect and ensure the validity of the data. In the screening of invalid questionnaires, the first criterion is the completeness of completion. If three options are not answered, it will be judged as invalid. Secondly, if there are 10 consecutive items answered with the same choice, it is also judged to be invalid.

After eliminating the invalid questionnaires, the data of 432 respondents were finally obtained. Among them, 56.4 percent were males and 43.6 percent were females. Those aged 25 or below accounted for 13.2 percent, those aged 26 - 30 accounted for 24.6 percent, those aged 31 - 35 accounted for 39.1 percent, those aged 36 - 40 accounted for 15.1 percent, those aged 41 - 45 accounted for 5.7 percent, and those aged 46 or above accounted for 2.3 percent. And, master's degree was likely to close in half of proportion, at 48.3, including PhD candidates, doctoral degree accounted for 51.7 percent. In addition, 60.3 percent of them are unmarried, 39.7 percent of them are married. Moreover, the number of respondents studying at university level was the largest, accounting for 57.4 of the total, others at scientific research institutions, accounting for 42.6 percent. In general, the sample distribution is relatively average.

3.2. Measures

All the variables were measured using well-established scales in the existing literature. The Chinese version of the measures was created following the "translation and back-translation" procedure (Brislin, 1980). Likert scale 5 was used, ranging from 1 (strongly disagree) to 5 (strongly agree) was designed for all

measures except for demographic variables. All measurements were reported by self-assessment.

Academic justice climate. Based on the scale of academic justice climates with 15 items compiled by Colquitt (2001). Some typical sample items were “In our scientific research team, supervisors and academic team members respect me.” In the research team, the decision-making process is based on accurate, objective information.” Cronbach’s alpha of this scale was .91.

Psychological security. In this study, we cited (May, Gilson, & Harter, 2004). scale developed by, with a total of 5 items. The reliability and validity of the scale have been well verified in Chinese situation (Yu & Xue, 2022). Some typical sample items were “In the research team, I don’t have to look over my shoulder all the time”, “In the research team, There are always people who keep picking on me.” Cronbach’s alpha of this scale was .78.

Psychological resilience. In this study, we used the psychological resilience scale in the Connor and Davidson (2003), with a total of 25 items. It has been used by Chinese scholars and proved to have a good reliability and validity (Zheng & Xu, 2022). Some sample items were “I tend to recover quickly after hardship or illness”, “I won’t let failure discourage me.” Cronbach’s alpha of this scale was .94.

Employability. In this study, we measured using 16-items taken from Rothwell and Arnold (2007). It has been assessed by Chinese scholars and proved to have a good reliability and validity (Zhong, Qian, & Wang, 2020). Some typical sample items were “As long as I have some scientific ability, I have many job opportunities”, “There are plenty of job opportunities in other areas besides the skills I have gained by the current research team.” Cronbach’s alpha of this scale was .90.

Control variables. In order to obtain unbiased estimates of the main effects, we controlled for the demographic variables (i.e. age, gender, married status, working situation and education). Gender was measured as a categorical variable, coded as “0” for male, “1” for female, Age was measured in years. married status was coded as “0” for married, “1” for unmarried. Working situation was assessed as “0” for university, “1” for scientific research institutions. Education was coded as “0” for master degree, including PhD candidates, “1” for doctoral degree in the current organization.

3.3. Data Analysis

The data were analyzed using descriptive statistics (mean, standard deviation), correlation analysis, and multiple hierarchical regression analysis with the aid of SPSS 23 software. Measurement model fit and validity (discriminant as well as convergent) were tested using confirmatory factor analysis in Amos 21.0. For a more nuanced understanding of the moderating effects, the conditional relationship between academic justice’s climate and the proposed outcomes was plotted graphically.

4. Results

4.1. Confirmatory Factor Analysis (CFA)

We assessed the convergent and discriminant validity of the key constructs by Mplus 7.4 software (Fornell & Larcker, 1981) because all the variables were evaluated by self-report. A four-factor model was compared with alternative models. As shown in Table 1, the four-factor model (i.e. academic justice climate, psychological security, employability and psychological resilience) yielded a good fit to the data ($\chi^2 = 553.19$, $p < .001$, CFI = .93, TLI = .91, RMSEA = .05) and was superior to alternative models, including a three-factor model in which psychological security and employability, were combined ($\chi^2 = 987.08$, $p < .001$, CFI = .80, TLI = .77, RMSEA = .10); a two-factor model in which academic justice climate and psychological resilience, as well as psychological security and employability were combined ($\chi^2 = 1493.13$, $p < .001$, CFI = .64; TLI = .56, RMSEA = .17); and a one-factor model in which all key variables were combined into one factor ($\chi^2 = 2313.65$, $p < .001$, CFI = .42, TLI = .40, RMSEA = .19), indicating that all variables were adequately distinct. Moreover, all the factor loading of the variables in the four-factor model were significant, revealing convergent validity.

4.2. Descriptive Statistics and Correlations

In this study, SPSS 23.0 software was used to conduct correlation analysis on the main variables and related control variables involved in the study. Pearson correlation coefficient method was used to test the correlation among the variables in this study. The specific analysis results are shown in Table 2. There is a significant positive correlation between academic justice climate and psychological security ($r = .027$, $p < .05$). There is a significant positive correlation between psychological security and employability ($r = .237$, $p < .01$). There is a significant positive correlation between academic justice climate and employability ($r = .566$, $p < .01$). There is a significant positive correlation between psychological resilience and employability ($r = .660$, $p < .01$). These results lay the foundation for the next causal analysis.

Table 1. Results of confirmatory factor analysis of the study variables.

	Model	χ^2	df	CFI	TLI	RMSEA
1	Four-factors model (AJC, PS, E, R)	553.19	274	.93	.91	.05
2	Three-factors model (AJC, PS + E, R)	987.08	287	.80	.77	.10
3	Two-factors model (AJC + R, PS + E)	1493.13	295	.64	.56	.14
4	One-factors model (AJC + R + PS + E)	2313.65	298	.42	.40	.19

Note: $N = 432$. All alternative models are compared to the hypothesized model (M1). AJC = Academic Justice Climate; PS = Psychological Security; E = Employability; R = Resilience; “+” = combining factors.

Table 2. Means, standard deviations, and correlation.

Variable	M	SD	1	2	3	4	5	6	7	8	9
1. Gender	1.69	.46									
2. Age	1.32	.57	.074								
3. Marital Status	1.94	.23	-.059	-.514**							
4. Working situation	2.05	1.85	.065	.240**	-.046						
5. Education	2.08	.55	-.074	.132	-.140	.112					
6. Academic Justice Climate	5.08	2.49	.028	-.252**	.175*	-.046	-.068	(.91)			
7. Psychological Security	3.34	1.10	-.145	-.003	.014	.129	.108	.027*	(.78)		
8. Employability	3.62	.60	-.176*	-.047	.008	.087	-.057	.566**	.237**	(.90)	
9. Resilience	3.48	.53	-.152*	-.059	.041	.052	-.143	.592**	.078*	.660**	(.94)

Note. $N = 432$. Gender: 0 = “male”, 1 = “female”; Age: 1 = “24 years old and below”, 2 = “25 - 30 years old”, 3 = “31 - 40 years old”, 4 = “41 - 50 years old”, 5 = “51 years old and above”; Marital Status: 1 = “married”, 2 = “single”; Marital Status: 1 = “married”, 0 = “single”; Working situation: 1 = “University”, 2 = “Scientific Research Institution”; Education: 1 = “Junior high degree and below”, 2 = “Senior high degree”, 3 = “Junior college”, 4 = “Bachelor or above”; Abbreviation: M = mean; SD = standard deviation. * $p < .05$. ** $p < .01$. *** $p < .001$.

4.3. Hypothesis Testing

Regression analysis was used to test the hypotheses in study. In H1, we proposed that academic justices climate would relate positively to employability. As can be seen from **Table 3**, Academic justices climate positively affected employability of researchers ($\beta = .602$, $p < .001$, Model 6). Thus, H1 was supported. H2 stated that psychological security would relate positively to employability of researchers. **Table 3** shows that the effect of psychological security on employability of researchers was positive ($\beta = .226$, $p < .001$, Model 7). Thus, H2 was supported.

Meanwhile, the academic justices climate is still significantly positively correlated with employability of researchers ($\beta = .202$, $p < .01$, M7) while their correlation coefficient decreased from .207 to .202. These results indicate that psychological security plays a partially mediating role in the relationship between Academic justices climate and employability. To further examine the mediating effect of psychological security, we used the Monte Carlo method, generating unbiased confidence intervals (CIs) of the indirect effect (10,000 resampling; Preacher, Rucker, & Hayes, 2007). The results presented in **Table 4** indicate that the indirect effect of Academic justices climate on employability via psychological security was significant ($B = .06$, $SE = .02$, $CI = [.04, .23]$, excluding zero). Thus, H3 was supported.

H4 predicted that “psychological resilience would moderate the relationship between academic justice climate and psychological security with the relationship being stronger when psychological resilience is high.” In order to test moderation effect, hierarchical regression analysis was performed which adds control variables (gender, age, marital status, working situation and education), independent variables (academic justice climate), moderators (psychological resilience)

Table 3. Results of the mediating effects of psychological security.

	Psychological Security				Employability		
	M1	M2	M3	M4	M5	M6	M7
Gender	-.14	-.143	-.119	-.118	-.188	-.215	-.183
Age	-.03	-.037	-.047	-.046	-.078	.056	.065
Marital status	.01	.009	.016	.025	-.049	-.085	-.087
Working situation	.14	.137	.126	.132	.125	.119	.088
Education	.09	.087	.105	.108	-.082	-.065	-.085
Psychological security							.226***
Academic Justice Climate		.022**	.098**	.752**		.207***	.202***
Resilience			.123*	.642*			
Academic Justice Climate * Resilience				.127**			
R^2	.01	.06	.09	.13	.02	.08	.16
ΔR^2	.01	.05	.03	.04	.02	.06	.08
F	1.728	1.446**	1.471**	1.579***	1.879	18.107***	18.852***

Note: Standardized regression coefficients reported. * $p < .05$. ** $p < .01$. *** $p < .001$. (two-tailed).

Table 4. Bootstrapping test result of mediating effect of psychological security.

Path	Estimate	SE	95% CI	
			LL	UL
AJC-PS-E	.06	.02	.04	.23

Note: $N = 432$. Unstandardized regression coefficients are reported. LL = lower limit of the 95% confidence interval, UL = upper limit of the 95% confidence interval. The standard errors and confidence intervals refer to the indirect effects. AJC = Academic Justice Climate; PS = Psychological Security; E = Employability; * $p < .05$. ** $p < .01$ (two-tailed).

and interaction terms of independent variables and moderators (academic justice climate * resilience) into the model. Results of our hierarchical regression models are reported in **Table 3**. The results showed that interaction terms of academic justice climate and psychological Resilience were significantly positively correlated with psychological security ($\beta = .127, p < .01, M4$).

A simple slope effect diagram based on psychological resilience higher and lower than a standard deviation was further mapped out (see **Figure 2**), which concludes that a higher employee's level of psychological resilience contributes to a stronger positive effect of academic justice climate on psychological security. The above results suggest that psychological resilience enjoys a positive moderating effect on the relationship between academic justice climate and psychological security, by which H4 is accordingly supported.

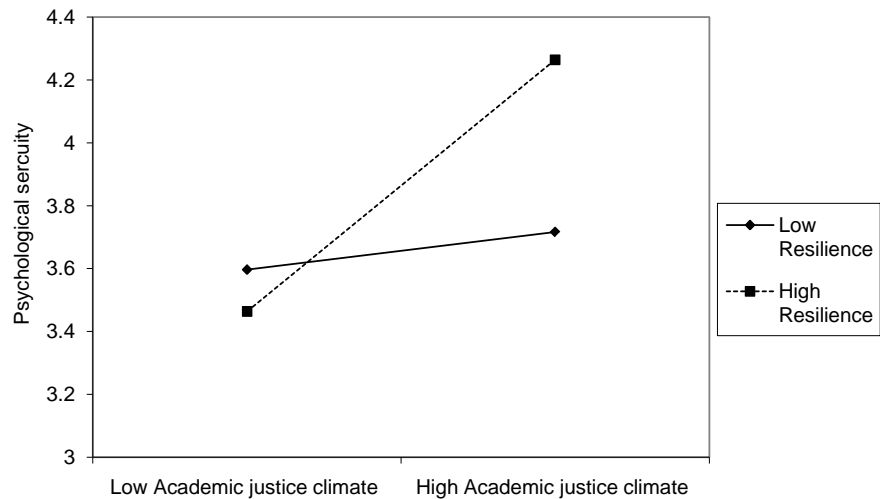


Figure 2. Moderating effect of psychological resilience on the relationship between Academic Justice Climate and Psychological Security.

Table 5. Results from the moderated mediation path analysis.

PS	Estimate	SE	95% CI	
			LL	UL
+1 SD	.12	.03	.12	.35
-1 SD	.02	.05	-.06	.04
Diff	.17	.06	.09	.29
The effect of moderating mediation	.14	.07	.06	.21

Note: $N = 432$. Unstandardized regression coefficients are reported. LL = lower limit of the 95% confidence interval, UL = upper limit of the 95% confidence interval. The standard errors and confidence intervals refer to the indirect effects. * $p < .05$. ** $p < .01$ (two-tailed).

H5 proposes a moderated mediation model. To test this hypothesis, we generated unbiased CIs of the conditional indirect effect by conducting a bootstrapping based analytic process via Mplus 7.4 (Preacher et al., 2007). As shown in Table 5, the indirect relationship from Academic Justice Climate to employability through psychological security was stronger when psychological resilience was high (+1 SD; $B = .12$, $SE = .03$, 95% CI [.06, .35], excluding zero) than when psychological resilience was low (-1 SD; $B = .02$, $SE = .05$, 95% CI [-.06, .04]). The difference between the two levels was significant ($B = .17$, $SE = .07$, 95% CI [.09, .29], excluding zero). Thus, H5 was supported.

5. Conclusion

5.1. Theoretical Implications

Our research makes several theoretical contributions to the academic justice climate and employability literature. First, by connecting academic justice climate and employability for the first time and revealing the internal psychological

processes (psychological security) of academic justice climate impact on employability, we respond to the calls for more studies to discuss theoretically and empirically the effectiveness of academic justice climate (Wang & Zhang, 2021). In addition, although prior research has pointed out that leader-related factors may impact researchers' employability (e.g., Zhong, Qian, & Wang, 2020), little research has systematically discussed the impact of an external environment (e.g., academic justice climate) on employability. Our research successfully connects the academic justice climate literature and employability literature as well as offers a broader pool for exploring the antecedents of employability. Furthermore, our research revealed the boundary conditions of the relationship between academic justice climate and employability by identifying the moderating influence of psychological resilience in the relationships, which provides significance knowledge about when and under what conditions academic justice climate affects researchers' employability.

5.2. Practical Implications

The study also carries implications for academic institutions' practice. First of all, research institutions must enhance the academic fairness atmosphere by adopting transparent regulations and service-oriented organizational culture, especially in areas such as research funding, professional title assessment, and academic achievement evaluation. Only a fair and just research environment can make researchers concentrate on academic research, thereby obtaining more funding, honors, and awards, enhancing their employability and competitiveness. Second, researchers need to strengthen their psychological resilience, so they can alleviate pressure and improve their employability and competitiveness by cultivating strong inner strength in any environment they are in. Especially under the current strong pressure of research evaluation, researchers should enhance their psychological resilience. Finally, research institutions can enhance the mental and physical health of researchers and improve their employability by offering psychological training, health lectures, academic exchanges, etc. Informal communication can ease researchers' anxiety about academic unfairness, thereby helping them understand the impact of external environments on their inner psychology and enhance individual resources to mitigate negative external impacts.

5.3. Limitations and Directions for Future Research

Although the results of this study can enrich theoretical research and promote management practice, there are still some shortcomings that need to be improved in subsequent studies. Firstly, all variables were measured by the researchers or postgraduates, and future research could use multiple sources of data research to collect data. Although we collected data at two time points, the use of self-report questionnaires to measure study variables may introduce the possibility of common method variance. However, we expect minimum distor-

tion due to common method bias as we adopted necessary procedural and statistical remedies to keep it in check (Podsakoff, MacKenzie, & Podsakoff, 2012). We recommend future researchers to obtain ratings from multiple sources such as peers and supervisors to avoid common method variance. Secondly, future research should try to explore more possible mediating variables and regulating variables, and explain their mechanism of action from a new theoretical perspective. Finally, although the current study controlled for the effects of gender, age, marital status and working situation, there may be a range of variables such as personal trait, supervisor leadership, academic task complexity and parenting style that may affect their employability. Thus, it is important that these variables are taken into account in future research models on employability.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

Founding Source

This research was supported by the grants funded by the National Natural Science Foundation of China (NSFC, Project ID: 72132009).

Ethical Approval

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed Consent

Informed consent was obtained from all individual participants included in the study.

References

- Asante, E. A., Oduro, F., Danquah, B. et al. (2022). From Being Sacked to Being Unwell: A Conservation of Resources View on the Effects of Psychological Contract Violation on Layoff Victims' Wellbeing. *Human Resource Management Journal*, *33*, 362-383. <https://doi.org/10.1111/1748-8583.12442>
- Blake, H., Somerset, S., Mahmood, I., Mahmood, N., Corner, J., Ball, J. K., & Denning, C. (2022). Workforce Experiences of a Rapidly Established SARS-CoV-2 Asymptomatic Testing Service in a Higher Education Setting: A Qualitative Study. *International Journal of Environmental Research and Public Health*, *19*, Article No. 12464. <https://doi.org/10.3390/ijerph191912464>
- Block, J., & Kremen, A. M. (1996). IQ and Ego-Resiliency: Conceptual and Empirical Connections and Separateness. *Journal of Personality and Social Psychology*, *70*, 349-361. <https://doi.org/10.1037//0022-3514.70.2.349>
- Brislin, R. W. (1980). Translation and Content Analysis of Oral and Written Materials. In

- H. C. Triandis, & J. W. Berry (Eds.), *Handbook of Cross-Cultural Psychology* (pp. 389-444). Allyn & Bacon.
- Cloutier, J., & Vilhuber, L. (2008). Procedural Justice Criteria in Salary Determination. *Journal of Managerial Psychology, 23*, 713-740.
<https://doi.org/10.1108/02683940810894765>
- Colquitt, J. A. (2001). On the Dimensionality of Organizational Justice: A Construct Validation of a Measure. *Journal of Applied Psychology, 86*, 386-400.
<https://doi.org/10.1037/0021-9010.86.3.386>
- Connor, K. M., & Davidson, J. R. T. (2003). Development of a New Resilience Scale: The Connor-Davidson Resilience Scale (CD-RISC). *Depression and Anxiety, 18*, 76-82.
<https://doi.org/10.1002/da.10113>
- Coutu, D. L. (2002). How Resilience Works. *Harvard Business Review, 80*, 46-56.
- De Cuyper, N. D., Makikangas, A., Kinnunen, U., Mauno, S., & De Witte, H. (2012). Cross-Lagged Associations between Perceived External Employability, Job Insecurity, and Exhaustion: Testing Gain and Loss Spirals According to the Conservation of Resources Theory. *Journal of Organizational Behavior, 33*, 770-788.
<https://doi.org/10.1002/job.1800>
- De Cuyper, N., & De Witte, H. (2010). Impress to Become Employable. The Case of Temporary Workers. *Journal of Career Development, 37*, 635-652.
<https://lirias.kuleuven.be/handle/123456789/240142>
- Edmondson, A. C. (1999). Psychological Safety and Learning Behavior in Work Teams. *Administrative Science Quarterly, 44*, 350-383. <https://doi.org/10.2307/2666999>
- Fornell, C., & Larcker, D. F. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *Journal of Marketing Research, 18*, 39-50.
<https://doi.org/10.1177/002224378101800104>
- Forrier, A., & Sels, L. (2003). The Concept Employability: A Complex Mosaic. *International Journal of Human Resources Development and Management, 3*, 102-124.
<https://doi.org/10.1504/IJHRDM.2003.002414>
- Gearhart, M. C., Berg, K., Barnhart, S., Bender, A., & Jones, C. (2023). Police Behaviors and Procedural Justice: Testing Predictors of Police-Initiated Post-Traumatic Stress Symptoms. *Children and Youth Services Review, 144*, Article ID: 106740.
<https://doi.org/10.1016/j.childyouth.2022.106740>
- Greenbaum, R. L., Bonner, J. M., Mawritz, M. B., Butts, M. M., & Smith, M. B. (2020). It's All about the Bottom Line: Group Bottom-Line Mentality, Psychological Safety, and Group Creativity. *Journal of Organizational Behavior, 41*, 503-517.
<https://doi.org/10.1002/job.2445>
- Hackman, J. R., & Hackman, R. J. (2002). *Leading Teams: Setting the Stage for Great Performances*. Harvard Business Press.
- Hauenstein, N. M. A., Mcgonigle, T., & Flinder, S. W. (2001). A Meta-Analysis of the Relationship between Procedural Justice and Distributive Justice: Implications for Justice Research. *Employee Responsibilities and Rights Journal, 13*, 39-56.
<https://doi.org/10.1023/A:1014482124497>
- Haynie, J. J., Cullen, K. L., Lester, H. F., Winter, J., & Svyantek, D. J. (2014). Differentiated Leader-Member Exchange, Justice Climate, and Performance: Main and Interactive Effects. *Leadership Quarterly, 25*, 912-922.
<https://doi.org/10.1016/j.leaqua.2014.06.007>
- Hobfoll, S. E. (1989). Conservation of Resources: A New Attempt at Conceptualizing Stress. *American Psychologist, 44*, 513-524.

<https://doi.org/10.1037//0003-066X.44.3.513>

- Hobfoll, S. E. (2002). Social and Psychological Resources and Adaptation. *Review of General Psychology, 6*, 307-324. <https://doi.org/10.1037/1089-2680.6.4.307>
- Hobfoll, S. E. (2011). Conservation of Resources Caravans in Engaged Settings. *Journal of Occupational and Organizational Psychology, 84*, 116-122. <https://doi.org/10.1111/j.2044-8325.2010.02016.x>
- Jiang, Z., Jiang, Y., & Nielsen, I. (2021). Thriving and Career Outcomes: The Roles of Achievement Orientation and Resilience. *Human Resource Management Journal, 31*, 143-164. <https://doi.org/10.1111/1748-8583.12287>
- Kahn, W. A. (1990). Psychological Conditions of Personal Engagement and Disengagement at Work. *Academy of Management Journal, 33*, 692-724. <https://doi.org/10.2307/256287>
- Lee, S., Kim, S. L., & Yun, S. (2017). A Moderated Mediation Model of the Relationship between Abusive Supervision and Knowledge Sharing. *The Leadership Quarterly, 29*, 403-413. <https://doi.org/10.1016/j.leaqua.2017.09.001>
- Li, A., & Cropanzano, R. (2009). Fairness at the Group Level: Justice Climate and Intra-unit Justice Climate. *Journal of Management, 35*, 564-599. <https://doi.org/10.1177/0149206308330557>
- Lipponen, J., Koivisto, S., & Olkkonen, M. E. (2005). Procedural Justice and Status Judgements: The Moderating Role of Leader Ingroup Prototypicality. *Leadership Quarterly, 16*, 517-528. <https://doi.org/10.1016/j.leaqua.2005.06.004>
- Luthans, F., Luthans, K. W., & Luthans, B. C. (2004). Positive Psychological Capital: Beyond Human and Social Capital. *Business Horizons, 47*, 45-50. <https://doi.org/10.1016/j.bushor.2003.11.007>
- Luthans, F., Vogelgesang, G. R., & Lester, P. B. (2006). Developing the Psychological Capital of Resiliency. *Human Resource Development Review, 5*, 25-44. <https://doi.org/10.1177/1534484305285335>
- May, D. R., Gilson, R. L., & Harter, L.M. (2004). The Psychological Conditions of Meaningfulness, Safety and Availability and the Engagement of the Human Spirit at work. *Journal of Occupational and Organizational Psychology, 77*, 11-37. <https://doi.org/10.1348/096317904322915892>
- Naumann, S. E., & Bennett, N. (2000). A Case for Procedural Justice Climate: Development and Test of a Multilevel Model. *Academy of Management Journal, 43*, 881-889. <https://doi.org/10.2307/1556416>
- Peacock, R. P. (2022). The Generalizability of Public Judgments of Procedural Justice across Police Interaction and Demographic Variables. *Journal of Criminal Justice, 82*, Article ID: 101999. <https://doi.org/10.1016/j.jcrimjus.2022.101999>
- Plomp, J., Tims, M., Khapova, S. N., Jansen, P. G. W., & Bakker, A. B. (2019). Psychological Safety, Job Crafting, and Employability: A Comparison Between Permanent and Temporary Workers. *Frontiers in Psychology, 10*, Article 974. <https://doi.org/10.3389/fpsyg.2019.00974>
- Podsakoff, P. M., MacKenzie, S. B., & Podsakoff, N. P. (2012). Sources of Method Bias in Social Science Research and Recommendations on How to Control It. *Annual Review of Psychology, 63*, 539-569. <https://doi.org/10.1146/annurev-psych-120710-100452>
- Preacher, K. J., Rucker, D. D., & Hayes, A. F. (2007). Addressing Moderated Mediation Hypotheses: Theory, Methods, and Prescriptions. *Multivariate Behavioral Research, 42*, 185-227. <https://doi.org/10.1080/00273170701341316>
- Rothwell, A., & Arnold, J. (2007). Self-Perceived Employability: Development and Validation.

- tion of a Scale. *Personnel Review*, *36*, 23-41.
<https://doi.org/10.1108/00483480710716704>
- Rubino, C., Avery, D. R., McKay, P. F., et al. (2018). And Justice for All: How Organizational Justice Climate Deters Sexual Harassment. *Personnel Psychology*, *71*, 519-544.
<https://doi.org/10.1111/peps.12274>
- Shin, J., Taylor, M. S., & Seo, M. G. (2012). Resources for Change: The Relationships of Organizational Inducements and Psychological Resilience to Employees' Attitudes and Behaviors toward Organizational Change. *Academy of Management Journal*, *55*, 727-748.
<https://doi.org/10.5465/amj.2010.0325>
- Tang, Y. S. (2015). On Responding to Unfair Treatment of Research Personnel. *Journal of Sinopec Management Institute*, *17*, 17-19.
- Tangirala, S., & Ramanujam, R. (2008). Employee Silence on Critical Work Issues: The Cross Level Effects of Procedural Justice Climate. *Personnel Psychology*, *61*, 37-68.
<https://doi.org/10.1111/j.1744-6570.2008.00105.x>
- Van Jaarsveld, D. D., et al. (2021). Unpacking the Relationship between Customer (In)Justice and Employee Turnover Outcomes: Can Fair Supervisor Treatment Reduce Employees' Emotional Turmoil? *Journal of Service Research*, *24*, 301-319.
<https://doi.org/10.1177/1094670519883949>
- Volmer, J. (2015). Followers' Daily Reactions to Social Conflicts with Supervisors: The Moderating Role of Core Self-Evaluations and Procedural Justice Perceptions. *Leadership Quarterly*, *26*, 719-731. <https://doi.org/10.1016/j.leaqua.2015.01.005>
- Walumbwa, F. O., Wu, C., & Orwa, B. (2008). Contingent Reward Transnational Leadership, Work Attitudes, and Organizational Citizenship Behavior: The Role of Procedural Justice Climate Perceptions and Strength. *Leadership Quarterly*, *19*, 251-265.
<https://doi.org/10.1016/j.leaqua.2008.03.004>
- Wang, N., & Zhang, S. (2021). Building an Interdisciplinary and Socially Impact-Driven Research Evaluation Framework: Analysis Based on the Research Excellence Framework in UK. *China Higher Education Research*, *8*, 71-77. (In Chinese)
- Wittekind, A., Raeder, S., & Grote, G. (2010). A Longitudinal Study of Determinants of Perceived Employability. *Journal of Organizational Behavior*, *31*, 566-586.
<https://doi.org/10.1002/job.646>
- Wong, S. I., Kost, D., & Fieseler, C. (2021). From Crafting What You Do to Building Resilience for Career Commitment in the Gig Economy. *Human Resource Management Journal*, *31*, 918-935. <https://doi.org/10.1111/1748-8583.12342>
- Xia, A., Wang, B., Song, B., Zhang, W., & Qian, J. (2019). How and When Workplace Ostracism Influences Task Performance: Through the Lens of Conservation of Resource Theory. *Human Resource Management Journal*, *29*, 353-370.
<https://doi.org/10.1111/1748-8583.12226>
- Xiang, K., Liu, J., Qiao, G., Gao, F., & Zhang, H. (2023). Does Bullying Reduce Occupational Commitment in Hospitality Employees? Mixed Empirical Evidence from Resource Conservation Theory and Embodied Cognition Perspectives. *International Journal of Hospitality Management*, *108*, Article ID: 103365.
<https://doi.org/10.1016/j.ijhm.2022.103365>
- Yu, Y. D., & Xue, Y. (2023). The Influencing Mechanism of Differential Leadership on Employee Knowledge. *Soft Science*, 1-12. (In Chinese)
<https://kns.cnki.net/kcms/detail/51.1268.G3.20221026.0933.006.html>
- Zheng, Y. L., & Xu, Y. S. (2022). The Effect of Mindfulness on Academic Procrastination of College Students in Online Learning Environments: Resilience and Self-Control as

Chain Mediator. *Journal of Psychological Science*, *45*, 1450-1457. (In Chinese)

Zhong, L., Qian, Z., & Wang, D. (2020). How Does the Servant Supervisor Influence the Employability of Postgraduates? Exploring the Mechanisms of Self-Efficacy and Academic Engagement. *Frontiers of Business Research in China*, *14*, Article No. 11.

<https://doi.org/10.1186/s11782-020-00079-1>