Navigating a turbulent career path without alienation: The mediating role of work-related rumination and the moderating effect of information literacy

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Abstract: Against the backdrop of frequent industrial restructuring and accelerated technological iteration, career insecurity has become a critical stressor affecting organizational stability and individual mental health. Grounded in stress and coping theory, this study develops a moderated mediation model to examine how career insecurity shapes employees' work alienation, as well as testing the mediating role of work-related rumination and the moderating effect of information literacy. Using snowball sampling, survey data are collected from 512 employees in first-tier, emerging first-tier, and provincial capital cities. Empirical results indicate that career insecurity positively predicts work alienation, work-related rumination mediates this relationship, and information literacy negatively moderates the path from career insecurity to work-related rumination. The findings deepen the theoretical understanding of the formation mechanisms of negative work attitudes in the digital era. Moreover, by enhancing employees' information literacy and optimizing stress management strategies, the study offers practical guidance for organizations seeking to reduce work alienation.

Keywords: Career insecurity, Information literacy, Stress and coping theory, Work alienation, Work-related rumination.

1. Introduction

When employees begin their careers, supervisors or HR managers may briefly discuss career planning. They ask about expected career paths and whether expectations are met, which seem to be personal matters that have little to do with the enterprise and its leaders. That is the extent of the discussion. In many organizations, supervisors or HR managers rarely or never even mention the status of employees' career development over the course of their careers. This persistent lack of attention and guidance impedes the alignment of individual development with organizational goals. The discontinuity of career support renders employees highly susceptible to intense career insecurity when confronted with technological shifts and organizational change [1, 2]. As highlighted in the Global Human Capital Trends Report and related research, this insecurity not only undermines employee well-being but also fosters a sense of work alienation characterized by powerlessness and meaninglessness, psychologically decoupling employees from organizational objectives. In response, employees often activate coping mechanisms, including psychological processes such as work-related rumination [3]. Therefore, examining how career insecurity affects work alienation based on psychological coping mechanisms and identifying effective resource-based interventions are of theoretical and practical significance for improving organizational talent stability and sustainable human development.

According to stress and coping theory, this insecurity, as a typical stressor, undermines employees' well-being and psychologically detaches them from organizations. Grounded in this theory, the present study introduces work-related rumination as a mediating variable to reveal how continual cognitive

depletion in the face of uncertain career prospects evolves into work alienation. The study further explores the moderating role of information literacy in this process. It posits that employees with high information literacy can leverage efficient information processing to optimize cognitive processing patterns, thereby effectively blocking the pathway from career stress to negative coping.

The theoretical contributions and innovations of this study primarily lie in deepening research on the outcomes of career insecurity [4]. First, by constructing a moderated mediation model, it explains how career stress transforms into negative behavioral outcomes and elucidates the bridging role of cognitive coping (work-related rumination) between stress perception and adaptation outcomes (work alienation) [5]. Second, it identifies information literacy as a key moderating resource in stress coping, moving beyond prior research that primarily describes the negative effects of rumination and delineates the boundary role of personal capability in buffering career stress [6]. Finally, it offers practical guidance, suggesting that organizations go beyond traditional retention strategies by building continuous career support systems and enhancing employees' information literacy to strengthen psychological resilience in rapidly changing workplaces. In doing so, they reduce work alienation and promote sustainable development for both organizations and employees.

2. Literature Review

Career insecurity is a complex psychological structure centered on the subjective concerns of individuals about future career prospects. It is distinct from the traditional construct of job insecurity, which focuses solely on the continuity of the current position. Career insecurity encompasses the full lifecycle and multiple dimensions of career development [7]. Specifically, it involves worries about the lack of career opportunities (e.g., promotion and training), expectations of declining employment prestige and compensation, and deep concerns about unemployment, retirement security, and work–life imbalance. It also reflects self-doubt regarding whether future professional skills and physical fitness can match increasingly demanding job requirements [7, 8]. This comprehensive appraisal of future uncertainty forms a persistent psychological threat.

Work alienation refers to the degree of separation between employees and their work when their needs are unmet or when expectations diverge from workplace realities [9]. The core of this concept lies in clarifying the sense of disconnection between employees and work. When individuals perceive inconsistency between psychological expectations and actual support in the occupational setting, a subjective experience of estrangement arises. However, research on negative states such as work alienation remains relatively limited. Scholars have often focused on variables within positive psychology, such as work engagement or organizational commitment, while paying insufficient attention to negative psychological states like alienation [10]. This study focuses on this point and explores how employees experience psychological alienation and withdrawal under a persistent stressor, namely, career insecurity. It provides a supplement to understanding the formation mechanism of negative work attitudes among employees in the digital era [11].

According to stress and coping theory, career insecurity is a sustained threat perception and a representative workplace stressor encompassing career opportunities, future prestige, employment conditions, and resource fit. When employees perceive that their organization fails to provide stable career support, misalignments in promotion opportunities, compensation, skills, or personal expectations directly trigger psychological disequilibrium [12]. Under prolonged insecurity, employees may experience profound helplessness due to their inability to foresee the future. To cope with persistent psychological pressure and protect their remaining personal resources, they instinctively initiate a defensive mechanism by emotionally and psychologically distancing themselves from work [13]. Behaviorally, such defensive withdrawal manifests as indifference to work tasks, disregard for organizational goals, and loss of identification with the occupational role, culminating in work alienation. Hence, career insecurity is not merely a concern about future risks; it is a core driver of negative attitudes that produce psychological separation from the work environment.

Based on this finding, this study proposes the following hypothesis:

H₁: Career insecurity has a positive impact on work alienation

Work-related rumination is persistent, repetitive thinking about work problems during non-work time, such as after hours or during rest [3]. It is not only a psychological projection of career insecurity but also a dysfunctional cognitive coping style. Under sustained career threats, individuals often fall into negative emotions that trigger work-related rumination [14]. As career insecurity is broad and cannot be resolved quickly through action, employees become cognitively trapped in a closed "worry–reflection–further worry" loop [3]. Even outside the physical work environment, psychological resources are occupied by potential threats to career development, which prevent mental detachment. This persistent cognitive involvement neither resolves real-world career barriers nor alleviates stress; instead, repeated psychological simulation amplifies anxiety, playing a key transmission role between the stressor (insecurity) and negative psychological outcome (alienation) [15].
Therefore, this study proposes the following hypothesis:

H₂: Career insecurity positively affects work-related rumination

As a repetitive cognitive activity, the primary harm of work-related rumination lies in obstructing necessary psychological recovery during nonwork time. When employees repeatedly ponder abstract, nonconstructive questions after work (e.g., "Why am I the one facing this?"), cognitive and emotional resources remain highly activated and cannot be replenished. Stress and coping theory suggest that sustained psychological load leads to mental fatigue or emotional exhaustion, which are core components of burnout. When employees feel physically and mentally depleted, aversion to work naturally develops [16]. To cope with persistent emotional exhaustion and stress induced by rumination, employees instinctively initiate a self-protective defensive mechanism by emotionally distancing themselves from work, manifesting as indifference and cynicism toward work tasks, organizational missions, or colleagues [17]. This trajectory, from cognitive depletion to emotional exhaustion to defensive psychological withdrawal, ultimately erodes work involvement and identification, plunging employees into a state of work alienation [18].
Based on this finding, this study proposes the following hypothesis:

H₃: Work-related rumination positively affects work alienation

As a sustained concern about prospects, career insecurity disrupts the psychological equilibrium of employees. Under stress and coping theory, when employees perceive uncertainty in their career development, this perception extends into nonwork time, prompting them to continue and repeatedly think about work-related issues after work or during breaks. Such rumination reflects an inability to achieve effective psychological detachment from the work context to personal life. Although rumination entails cognitive processing of career problems, sustained cognitive activation during nonwork time keeps physiological and psychological systems in a prolonged state of arousal [19]. Given the breadth and duration of career insecurity, repeated deliberation continuously consumes cognitive resources and impedes psychological recovery. Long-term inability to escape work-related concerns produces significant psychological fatigue [20]. To address resource depletion caused by sustained cognitive activation, employees adopt defensive withdrawal strategies by emotionally distancing themselves from work, manifesting as disregard for current work goals and helplessness, ultimately evolving into work alienation [21]. Thus, work-related rumination connects stressors and psychological outcomes by converting career concerns into a persistent nonwork cognitive burden that drives psychological alienation.
On this basis, this study proposes the following hypothesis:

H₄: Work-related rumination mediates the relationship between career insecurity and work alienation

Information literacy is the ability to think critically and make objective, fair judgments about information sought and used. It encompasses efficient acquisition, critical evaluation, and effective utilization of information and is a core capability for wise participation in complex environments [22]. As a key cognitive resource and lifelong learning capability, information literacy plays an important moderating role when employees cope with career stress. Confronted with the complex stressor of career insecurity, individuals with high information literacy can leverage a deep understanding of the information environment to critically filter complex market dynamics, organizational changes, and career risk information, thereby avoiding misguidance by fragmented negative noise.

First, in terms of emotion regulation, employees with higher information literacy exhibit greater calm in the face of threat-laden uncertainty and can detach from passive emotional experiences using critical thinking, thereby avoiding falling into persistent, repetitive cognitive internal friction [23]. Second, in terms of cognitive coping, individuals with high information literacy are more inclined to construe career insecurity as a problem to be solved rather than an inescapable threat. They engage in purposeful, solution-focused thinking that effectively substitutes for nonconstructive, repetitive overthinking [24].

Moreover, in increasingly complex information environments, career anxiety is often amplified by negative content on social media or in interpersonal networks. Employees with high information literacy can easily filter exaggerated or inflammatory content, reducing the loss of control caused by uncertainty and diminishing sustained cognitive processing triggered by misinformation. They also make more judicious use of digital platforms to seek professional, constructive support rather than engaging in ineffective "collective rumination" on social media, interrupting the spread and reinforcement of negative cognition [25]. By contrast, employees with low information literacy are more susceptible to false or negative information, becoming trapped during nonwork time in repetitive rumination over perceived career crises and aggravating the depletion of psychological resources. Thus, information literacy can optimize individuals' information processing and emotion regulation under stress, significantly suppressing the positive effect of career insecurity on work-related rumination.

Based on this finding, this study proposes the following hypothesis:

H₅: Information literacy attenuates the positive impact of career insecurity on work-related rumination

The research framework of this study is illustrated in Figure 1.
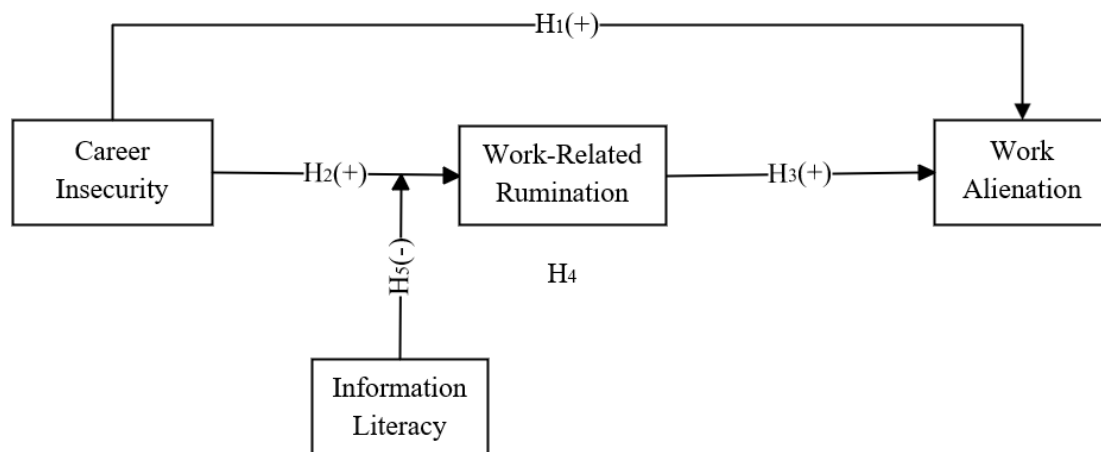
Figure 1.
Research framework.

3. Research Methods and Design

3.1. Research Objects

The study population consisted of employed individuals in China who perceived career insecurity and were at risk of work alienation. Participants worked in first-tier, emerging first-tier, and provincial capital cities, including Beijing, Shanghai, Guangzhou, Shenzhen, Nanchang, Chengdu, Hangzhou, Chongqing, Wuhan, Suzhou, Xi'an, Nanjing, Changsha, Zhengzhou, Tianjin, Hefei, Qingdao, Dongguan, Ningbo, and Foshan, and industries with intense competition, rapid technological updating, and high career uncertainty (e.g., consulting, finance, internet). Data collection was conducted via the Questionnaire Star platform. Initial targeted responses were obtained through personal social networks, followed by expansion using snowball sampling, and finally, large-scale collection through conference channels of industry consulting institutions. A total of 873 questionnaires were recovered. In accordance with academic standards, invalid samples were removed, including questionnaires completed under 100 seconds, respondents with less than six months of work tenure, respondents working outside the target cities, and questionnaires failing logic checks. The final valid sample comprised 512 questionnaires, yielding a 58.65% effective response rate.

Sample characteristics are shown in Table 1 below. Specifically, gender distribution was balanced (male 54.49%, female 45.51%), age was predominantly 26–35 (44.14%), work tenure was relatively evenly distributed and all over six months, and educational attainment was high, with 82.03% holding a bachelor's degree or higher. Respondents were primarily from highly competitive industries such as the internet, finance, and retail. Overall, the sample exhibited good industry representativeness and geographic coverage.

Table 1.
Characteristics of the sample (n = 512).

Controlled variables	Category	Number (persons)	Percentage (%)
Gender	Male	279	54.492
	Female	233	45.508
Age	25 or below	59	11.523
	26–35 years	226	44.141
	36–45 years	122	23.828
	46–55 years	76	14.844
	56 or above	29	5.664
Years of working	Less than 6 months	0	0.000
	6 months–3 years	140	27.300
	4–6 years	114	22.300
	7–9 years	131	25.600
	More than 10 years	127	24.800
Marital Status	Unmarried	199	38.867
	Married	311	60.742
	Prefer not to disclose	2	0.391
Education level	Junior college and below	92	17.969
	Bachelor's	277	54.102
	Master's	123	24.023
	Doctorate	20	3.906
Position level	Ordinary employee	350	68.359
	Junior manager	104	20.313
	Middle manager	43	8.398
	Senior manager	15	2.930
Industry	Internet/IT/software	98	19.141
	Finance/banking/insurance	104	20.313
	Traditional manufacturing	59	11.523
	High-tech manufacturing	42	8.203
	Education/training	28	5.469
	Healthcare/pharmaceuticals	63	12.305

	Consulting/law/accounting	32	6.250
	Retail/catering/tourism	70	13.672
	Government/public institutions	16	3.125
Work location	First-tier cities	164	32.031
	Emerging first-tier cities	172	33.594
	Provincial capital cities	176	34.375
	Other	0	0.000

3.2. Variable Measurement

Career insecurity was operationalized as the extent to which employees think and worry that core aspects of their future careers may develop in undesired ways, in reference to Spurk et al. [7] and measured using items from Cai et al. [8]. Work-related rumination was operationalized as the extent to which employees persistently think about work-related issues and concerns during nonwork time (e.g., after hours, rest periods), in reference to Cropley and Zijlstra [3] and measured using items from Cropley et al. [26]. Information literacy was operationalized as the capability, when facing information needs, to efficiently acquire, critically evaluate, and effectively utilize information, demonstrating deep awareness of the information environment, continuous experiential learning, and adherence to information ethics, in reference to Ahmad et al. [22]. This variable was measured using items from Ahmad et al. [22]. Work alienation was operationalized as the degree of separation between employees and work that arises when needs are unmet, or expectations are misaligned in the work context, in reference to Hirschfeld and Feild [9]. Items for measurement were also derived from Hirschfeld and Feild [9]. All variables were assessed using a five-point Likert scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree.

4. Empirical Data Analysis

4.1. Descriptive Statistics

The results reveal that the mean values of career insecurity and work alienation exceed 3, indicating relatively strong perceived career insecurity and work alienation among the participants. The standard deviations for each variable are approximately 1, suggesting appropriate dispersion. Skewness and kurtosis values for all variables are within ±1, indicating an approximately normal distribution, which is suitable for regression analysis. Detailed results are presented in Table 2.

Table 2.
Descriptive statistical analysis of variables.

Variable	Minimum value	Maximum value	Mean value	Standard deviation	Skewness	Kurtosis
CI	1	5	3.1711	0.85824	0.063	−0.905
WR	1	5	3.1577	0.46446	−0.154	−0.169
IL	1	5	3.5755	0.88494	−0.634	−0.146
WA	1	5	3.2354	0.86844	0.080	−0.918

Note: CI = career insecurity; WR = work-related rumination; IL = information literacy; WA = work alienation

4.2. Reliability Analysis

Reliability analysis is used to evaluate the consistency and stability of measurement instruments or questionnaires, ensuring that the measurement of corresponding variables has high credibility. In this study, reliability analysis was conducted on the items corresponding to each latent variable in the questionnaire. The results show that the Cronbach's alpha coefficients for career insecurity, work-related rumination, information literacy, and work alienation all exceed 0.700, indicating good reliability. Table 1 shows the detailed results.

Table 3.
Reliability analysis.

Variable	Cronbach's Alpha	Items
Career insecurity	0.889	8
Work-related rumination	0.798	15
Information literacy	0.953	20
Work alienation	0.910	10

4.3. Correlation Analysis

Correlation analysis assesses the degree and direction of association between two variables, with the relationship quantified through the computation of correlation coefficients. In correlation analysis, the primary focus is on statistical significance. An asterisk (*) indicates a significant relationship (i.e., the variables are correlated), while the absence of an asterisk indicates a correlation coefficient of 0 (i.e., the variables are not correlated) [27]. According to the analysis results, pairwise correlations exist among career insecurity, work-related rumination, information literacy, and work alienation. Table 4 presents the specific results of the correlation analysis.

Table 4.
Correlation analysis.

Name of variables	1	2	3	4
Career insecurity	1			
Work-related rumination	0.262***	1		
Information literacy	−0.185***	−0.261***	1	
Work alienation	0.254***	0.266***	−0.299**	1

Note: $**p < 0.010$, $***p < 0.001$.

4.4. Validity Analysis

Validity analysis assesses the extent to which research instruments (questionnaires, scales) accurately measure the concepts or characteristics of latent variables. It is a key criterion of research quality that directly affects the credibility and validity of research results. Validity analysis includes discriminant and convergent validity.

For discriminant validity, the square roots of the average variance extracted (AVE) for career insecurity, work-related rumination, information literacy, and work alienation exceed their correlations with any other latent variables, indicating good discriminant validity [28]. Table 5 presents the specific results of discriminant validity.

Table 5.
Discriminant validity.

Name of variables	1	2	3	4
1. Career insecurity	0.712			
2. Work-related rumination	0.262***	0.710		
3. Information literacy	−0.185***	−0.261***	0.708	
4. Work alienation	0.254***	0.266***	−0.299**	0.715
Name of variables	1	2	3	4
1. Career insecurity	0.712			
2. Work-related rumination	0.262***	0.710		
3. Information literacy	−0.185***	−0.261***	0.708	
4. Work alienation	0.254***	0.266***	−0.299**	0.715

Note: ** p < 0.010; *** p < 0.001; the diagonal is the square roots of the AVEs of the variables.

Convergent validity: Composite reliability (CR) values for all variables exceed 0.700, and average variance extracted (AVE) values are greater than 0.500. These results indicate that each variable has high convergent validity in the measurement, suggesting that each item effectively explains its

respective dimension and has a strong correlation with the other variables. Table 6 presents the detailed results of convergent validity.

Table 6.
Convergent validity.

Variable	AVE	CR
Career insecurity	0.508	0.892
Work-related rumination	0.504	0.938
Information literacy	0.501	0.952
Domestic work alienation	0.511	0.913

5. Hypothesis Testing

5.1. Direct Effect Test

Hierarchical regression analysis was performed to explore the direct effects and how independent variables influence dependent variables in this study. The overall validity of the regression model was assessed based on the F-statistic ($p < 0.050$). Standardized regression coefficients (β) were used to compare the relative importance of different independent variables on the dependent variable. The coefficient of determination (R^2) was employed to measure the explanatory power of the model regarding the variance in the dependent variable. Variance inflation factor (VIF, typically <10) was used to diagnose potential multicollinearity issues in the regression model β [29-31].

This study controlled for gender, age, work tenure, marital status, education, and position level. Linear regression analyses were conducted to test H1–H3. Career insecurity was used as the independent variable and work alienation as the dependent variable to confirm H1. Career insecurity was used as the independent variable and work-related rumination as the dependent variable to confirm H2. Work-related rumination was used as the independent variable and work alienation as the dependent variable to confirm H3. The summary of the analyses shows that if the F-statistics for H1, H2, and H3 are statistically significant, then β is also significant. Thus, the direct effects are confirmed. Career insecurity positively influences work alienation and work-related rumination, and work-related rumination positively influences work alienation. Table 7 reports the detailed results.

Table 7.
Summary of the direct effects analysis results.

Research hypothesis	β	t	VIF	R^2	Adj-R^2	ΔR^2	F value
H1	0.254***	5.930	1.001	0.064	0.063	0.064	7.163***
H2	0.242***	5.631	1.001	0.059	0.057	0.059	5.710***
H3	0.201***	4.643	1.002	0.041	0.039	0.041	4.557***

Note: *** $p < 0.001$.

5.2. Mediation Effect Test

This study used bootstrapping to test the significance of the mediation effect. Bootstrapping is a nonparametric resampling method that repeatedly draws a large number of resamples (e.g., 5,000) with replacement from the original sample to compute the mediation effect estimate each time, thereby constructing the statistical distribution of the mediation effect. The study determined the significance of the mediation effect by constructing its 95% confidence interval. If this confidence interval does not include 0, then the mediation effect can be deemed statistically significant [29].

The direct effect of career insecurity on work alienation and the mediating effect of work-related rumination have 95% bootstrap confidence intervals whose upper and lower bounds do not include 0 (Table 8). This result indicates that career insecurity not only directly predicts work alienation but also indirectly does so through the mediating role of work-related rumination. In summary, career insecurity affects work alienation through the mediation of work-related rumination, supporting H4.

Table 8.
Mediation effect table.

|	Effect	BootSE	BootLLCI	BootULCI
Total effect	0.2570	0.0410	0.1770	0.3350
Direct effect	0.2206	0.0413	0.1404	0.3008
Indirect effect of work-related rumination	0.0364	0.0125	0.0138	0.0631

5.3. Test for Moderating Effect

In this study, the hierarchical regression analysis by Baron and Kenny [32] was employed to test the moderating hypothesis. The test of the moderating effect can be divided into three hierarchical regression models. First, in the initial model, control variables were included to ensure that only the relationship between the independent and dependent variables could be observed. Second, the independent and moderating variables were added to the model to examine the direct relationship between the independent and dependent variables. Third, the interaction term between the independent and moderating variables (mean-centered) was added to the second model. The significance of the interaction term's coefficient was tested to determine whether the moderating variable significantly affects the relationship between the independent and dependent variables. If the interaction term is significant ($p < 0.050$), then the moderating effect is present; that is, the moderating variable significantly affects the relationship between the independent and dependent variables. According to the moderation effect table, β and the F-value for H5 are both significant. Hence, the moderating effect is confirmed: information literacy attenuates the positive impact of career insecurity on work-related rumination. Table 9 presents the detailed results.

Table 9.
Moderating effect table.

Research hypothesis	β	t	VIF	R²	Adj-R²	ΔR²	F value
H4	−0.108**	−2.45	1.153	0.14	0.135	0.04	27.639**

Note: ** $p < 0.010$.

At low levels of information literacy, career insecurity significantly positively affects work-related rumination, while at high levels, its effect weakens or becomes negative. This indicates that increasing information literacy diminishes the relationship between career insecurity and work-related rumination, exerting a negative moderating effect. The results are shown in Figure 2.
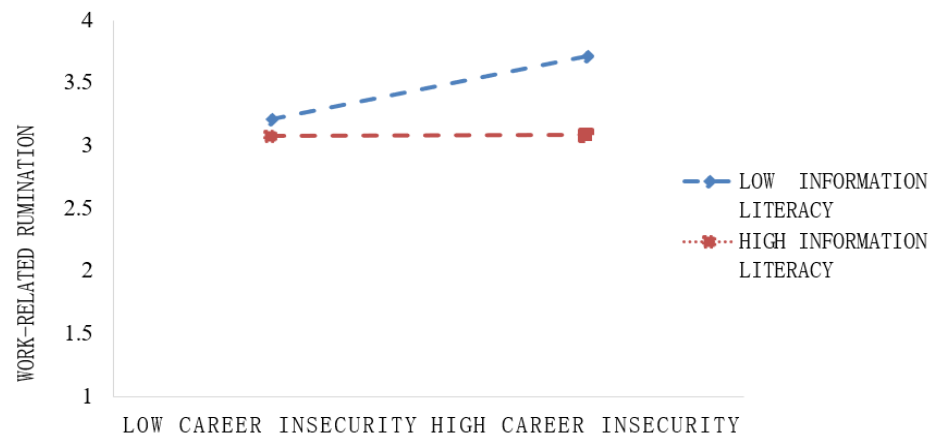
Figure 2.
Moderating effect of different levels of information literacy on the relationship between career insecurity and work-related rumination.

6. Discussion

The analytical model shows that career insecurity exerts a positive predictive effect on work alienation. In contexts characterized by fierce competition and rapid technological turnover, such as first-tier and emerging first-tier cities, concerns about the loss of future career opportunities, skill obsolescence, or unemployment risks disrupt inner equilibrium and lead to perceptions that the organizational environment cannot meet core career needs. According to stress and coping theory, career insecurity is a prototypical hindrance stressor that prompts the activation of defensive mechanisms. To cope with the helplessness and frustration brought by uncertainty, employees distance themselves emotionally from work and avoid potential psychological harm by reducing psychological investment, thereby subjectively entering a state of alienation from work tasks and organizational culture.

Mediation test results confirm that work-related rumination serves as a critical mediating bridge between career insecurity and work alienation. This suggests that the impact of career stress on employees' mindsets is not instantaneous but unfolds through a process of sustained cognitive depletion. Given the long-term nature of career insecurity, respondents often find it difficult to achieve psychological detachment during nonwork time and instead repeatedly contemplate career concerns, engaging in work-related rumination as a form of cognitive processing. Such high-intensity cognitive activation during rest periods interferes with psychological recovery and continuously consumes cognitive and emotional resources, leading to emotional exhaustion. When rumination-driven mental fatigue reaches a critical threshold, individuals adopt defensive strategies of cynicism and emotional detachment to maintain psychological balance, which in turn solidifies profound work alienation.

Furthermore, this study elucidates the moderating role of information literacy in the stress transmission pathway. Findings indicate that information literacy significantly weakens the positive effect of career insecurity on work-related rumination. This result suggests that employees with high information literacy are not only more adaptable at the technical level but also more resilient in cognitive and emotional regulation. Through critical evaluation of information, employees with high information literacy can more objectively discern threat signals in the career environment, thereby reducing the sense of loss of control triggered by uncertainty. Compared with those with low information literacy, who are more easily engulfed by negative noise and drawn into nonconstructive overthinking, high-information-literacy employees tend to convert stress into motivation for problem solving. This more constructive coping strategy effectively interrupts the transformation of career concerns into sustained rumination, demonstrating the vital value of information literacy as a lifelong learning capability in alleviating career stress in the digital era.

7. Conclusions and Implications

7.1. Research Conclusions

Based on a quantitative analysis of 512 valid questionnaires, this study examines the mechanism by which career insecurity influences work alienation. Results show that career insecurity is a key antecedent of work alienation, a threat perception that directly induces psychological distancing from work. Meanwhile, work-related rumination acts as a mediating bridge in stress transmission, whereby career insecurity triggers sustained cognitive processing during nonwork time and accelerates the depletion of psychological resources. In addition, information literacy exerts a moderating effect within the cognitive process of stress conversion, with higher levels of information literacy effectively weakening the impact of career insecurity on work-related rumination.

7.2. Theoretical Significance

By constructing a moderated mediation model, this study extends the application boundaries of stress and coping theory in the contexts of digital transformation and rapid technological iteration. The analysis verifies the direct driving force of career insecurity on negative work attitudes and reveals the internal mechanism by which career stress evolves into a long-term cognitive burden from the

perspective of work-related rumination. This approach advances understanding of the "process mechanisms" within stress outcome research. This study also breaks the limitation of traditional research that only considers information literacy as a technical ability by exploring its moderating role, highlighting its protective value as an individual psychological resource in mitigating cognitive depletion. The findings provide organizational behavior research with a new theoretical entry point for examining how individual traits buffer environmental stress.

7.3. Practical Significance

The findings offer clear guidance for organizational managers addressing the career-related psychological crises of employees. First, organizations should attach high importance to the psychological impact of industrial restructuring on employees and alleviate career insecurity at its source by improving their career development support systems and transparent promotion mechanisms. Second, they should establish reasonable working-hour management and psychological detachment guidance mechanisms, pay attention to recovery quality during non-work time, and reduce the incidence of negative work-related rumination. Finally, they should incorporate information literacy as a core module in talent development and enhance employees' information evaluation and rational analysis capabilities through empowerment-oriented training. This approach not only strengthens professional adaptability but also helps maintain robust cognitive appraisal in complex and volatile career environments, thereby effectively preventing the emergence of work alienation.

7.4. Research Limitations and Future Directions

This study into the mechanism by which career insecurity affects work alienation has certain limitations. On the one hand, constrained by its cross-sectional design, the analysis can only infer relationships among variables based on existing theoretical logic and cannot fully capture their dynamic evolution over time. Future research may adopt longitudinal tracking designs to more precisely depict the psychological progression from perceived career insecurity to cognitive rumination and, ultimately, to work alienation. In addition, while common method bias is statistically within a controllable range, because the sample data rely primarily on employees' self-assessments, future studies may introduce multisource evaluations and performance data to enhance the objectivity of conclusions.

Transparency:

The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

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