

The Effect of Secure-base Leadership on Work-related Flow: A Moderated Mediation Model

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Abstract: Secure-base leadership encourages employees to take risks and challenges and highly cares for them, which can improve employees' psychology, attitudes, and behaviors, and is beneficial for organizations to cope with the uncertainty of future development. Based on the cognitive appraisal theory of stress, which incorporates perceived stress and emotional intelligence, this study collected data from 568 questionnaires, and used hierarchical regression to explore the mechanism of action of safe-base leadership on employees' work immersion and the moderating role of emotional intelligence. The study showed that secure-base leadership significantly and positively affects work-related flow; secure-base leadership promotes work-related flow by decreasing employees' perceived stress; emotional intelligence negatively moderates the relationship between perceived stress and work-related flow, and further moderates the mediating role of perceived stress in the relationship between secure-base leadership and employees' work-related flow. The results of this study confirmed the intrinsic mechanism and boundary conditions between secure-base leadership and employee work-related flow, and provided worthwhile lessons and guidance for leaders to effectively promote employee work-related flow.

Keywords: Secure-base Leadership; Perceived Stress; Work-related Flow; Emotional Intelligence.

1. Introduction

Unprecedented changes are taking place in the globe right now, marked by sharp rises in uncertainty and a more complicated and unstable external environment [1]. Uncertainty, variability, complexity, and ambiguity have increased as a result of the ongoing technological revolution, the development of the internet, regional conflicts, and globalization processes. The world has thus entered the VUCA era, which stands for volatility, uncertainty, complexity, and ambiguity. The digital economy age has also been brought about by the quick development of cutting-edge digital technologies like cloud computing, blockchain, and artificial intelligence. In light of this, there have been significant shifts in people's lifestyles and means of production, which have affected social organizational structures and company operations extensively [2].

According to the VUCA era's characteristics, organizations will encounter more "black swan" events—events that are usually characterized by high degrees of complexity and uncertainty—as they grow [3]. Businesses must modify their organizational structures and management strategies in response to this uncertainty, necessitating the development of new leadership styles [4,5]. In this context, the concept of "Secure Base Leadership," a new framework within organizational behavior studies, has emerged. A leader that practices "secure base leadership" encourages staff members to experiment, take chances, and take on challenges by giving them a sense of safety, security, and protection. By increasing employee trust and the leader's influence, this leadership approach hopes to encourage more initiative and creativity from staff members in challenging situations [6].

Although research on Secure Base Leadership is still in its early stages, existing studies have shown that this leadership style can effectively promote employees' initiated behavior [7], innovative behaviors [8], creativity [9], and helping behaviors [10]. However, current studies have largely focused on the impact of Secure Base Leadership on employee

behaviors, with little attention given to how it can maintain employees' focus and enthusiasm at work. In the VUCA era, the heightened uncertainty of the external environment disrupts employees' work states, manifesting in symptoms such as distraction, anxiety, and burnout [11]. Therefore, how to stimulate employee work-related flow and maintain their enthusiasm for work has become an important task for business management.

Uncertainty in the external environment in the VUCA era affects employees' work states and necessitates new leadership traits [11]. Employees are more likely to suffer from burnout, anxiety, and diversions in such settings. Engaging employees and maintaining their excitement for work has become more important because they are vital resources for organizational development. According to positive psychology, work-related flow occurs when workers remain focused, dedicated, and passionate despite a lot of pressure and uncertainty [12]. Work-related flow increases employees' general well-being and capacity for innovation at work in addition to helping them perform better, be more creative, and feel more self-sufficient [12]. Studies have indicated that the attitudes, behaviors, and psychological states of employees are greatly impacted by the leadership styles of managers [13]. Although previous research has examined how leadership philosophies like charismatic and servant leadership foster work-related flow [11,14,15], the effect of Secure Base Leadership on work-related flow has not been thoroughly investigated.

This study aims to examine the mediating role of employees' perceived stress in the relationship between Secure Base Leadership and employee work-related flow, based on the Stress Appraisal Theory. In the VUCA era, stress is ubiquitous, and work-related flow often occurs in stressful situations, indicating that stress may influence the experience of flow [16,17]. However, the impact of stress depends on how individuals perceive and appraise stressors, particularly the potential impact of these stressors on individual growth, development, and well-being [18]. The cognitive appraisal

process includes primary and secondary appraisals. First, individuals assess whether stressors pose a threat to themselves and decide whether the stress is a challenge or a hindrance. This cognitive evaluation influences the individual's coping strategies [19]. Employees' perceived stress is a subjective experience; overstating or underestimating stress can have adverse effects, with perceived stress often having a greater impact than actual stress [20]. It is important to note that leadership behavior can affect employees' perceived stress [21]. Secure Base Leadership, through building trust and fostering a sense of attachment, enhances employees' sense of responsibility, thereby improving employee cohesion and loyalty and reducing perceived stress in the workplace [22]. When employees' perceived stress is alleviated, supported by Secure Base Leadership, they are likely to become more engaged in their work and pursue their goals, leading to higher work-related flow [23,24]. Therefore, employees' perceived stress may play a mediating role in the relationship between Secure Base Leadership and work-related flow.

Moreover, employees' perceived stress is influenced by their emotional intelligence. Emotional intelligence refers to an individual's ability to recognize, understand, manage, and regulate their own emotions and the emotions of others. Research has shown that employees with higher emotional intelligence are better at adjusting their mindset, reframing stressors, maintaining positive emotions, and enhancing their work-related flow [25,26]. Therefore, emotional intelligence may moderate the mediating effect between Secure Base Leadership and employee work-related flow.

In summary, Secure Base Leadership helps reduce employees' perceived stress, thereby increasing work-related flow. In this process, employees' perceived stress may mediate the relationship between Secure Base Leadership and work-related flow, while emotional intelligence may moderate this mediating effect. Based on these insights, this study proposes a moderated mediation model to explore the relationships between Secure Base Leadership, employees' perceived stress, and work-related flow.

2. Literature Review and Hypothesis

2.1. Secure-base Leadership

In the field of developmental psychology, Bowlby proposed attachment theory, with the core concept of a "secure base." This concept refers to how children perceive their parents as a source of comfort and security when seeking closeness and communication, while also viewing them as a secure base for exploring the world [10]. The fundamental idea of attachment theory is that humans are inherently inclined to form close relationships with individuals who provide a sense of safety and comfort, seeking solace and support from them. The person who offers this sense of protection and encouragement is referred to as a "secure base," characterized by their ability to respond and provide comfort whenever the individual needs support [10].

As attachment theory evolved, it was gradually applied to organizational settings, where it was integrated with leadership studies, resulting in the concept of "secure base leadership." Coombe introduced the concept of the "secure base" from attachment theory into the domain of organizational leadership, exploring the dimensions of secure base leadership and its impact on organizational outcomes [27]. Existing research defines secure base leadership as a

leadership style that provides employees with a secure haven and sense of safety, empowering them to take initiative, take risks, and seek challenges. The core elements of this leadership style include "care" and "challenge"[6]. Secure base leadership can be further divided into three main dimensions: availability, encouragement of growth, and noninterference [8]. Availability refers to the leader's willingness to provide support when employees need help. Encouragement of growth represents the leader's encouragement for employees to face challenges and pursue personal development and self-actualization. Noninterference reflects the leader's level of trust in subordinates, granting them decision-making autonomy and independence after delegating authority [7].

2.2. Secure Base Leadership and Employee Work-related flow

With the rise of positive psychology, the concept of "flow" has garnered widespread attention. Scholars in various fields, particularly organizational research, have begun to explore the experience of flow in the workplace [14]. Work-related flow refers to a state in which individuals are highly involved, enjoy, and experience pleasure in their work, leading them to be willing to invest effort and continue their tasks [28]. Work-related flow typically includes three dimensions: focus, work enjoyment, and intrinsic work motivation [29]. Specifically, Focus refers to the individual's ability to direct full attention to work tasks, ignoring external distractions [14]. Work enjoyment refers to the pleasure and joy experienced during work, leading to positive cognitive evaluations [13,15]. Intrinsic work motivation refers to the sense of high value and fulfillment derived from the work itself, which stimulates internal drive [15]. In summary, work-related flow enables employees to immerse themselves fully in their tasks, enhancing their work motivation and contributing to positive organizational outcomes [30].

As a key situational factor in an organization, leadership significantly influences employee cognition and behavior [31]. According to the cognitive appraisal theory of stress, when employees possess sufficient resources and derive growth and a sense of achievement from them, they are likely to perceive stressful situations as challenges, adopting proactive coping strategies [32]. Secure base leadership, by providing care, encouraging risk-taking and challenges, helps employees establish a strong sense of security, which stimulates their willingness to explore [6]. When employees perceive that secure base leadership offers more external resources, they typically transform stress into positive challenges and become more motivated to engage in their work, thereby promoting work-related flow. Specifically, the support provided by secure base leadership helps employees feel more secure when facing stress, fostering a positive work environment where they enjoy their work and become immersed in it [33,34]. Furthermore, through its growth encouragement features, secure base leadership helps employees improve their mindset, motivating them to pursue personal goals and develop themselves [8]. In such an environment, when employees experience the enhancement of their skills and knowledge, they are more likely to immerse themselves in their work, thus improving work efficiency [35,36]. Finally, through laissez-faire leadership, secure base leaders offer employees greater autonomy and freedom in decision-making, enhancing focus and engagement, ultimately fostering work-related flow [37].

In summary, secure base leadership creates a positive work environment, focusing on employee growth and development, while granting them significant work autonomy. Through these external supports, employees can achieve work-related flow in its three dimensions. Thus, as an external situational factor, secure base leadership provides help and guidance, helping employees achieve a balance between challenge and skill, thereby enhancing their work-related flow.

Based on this, the following hypothesis is proposed:

Hypothesis 1: secure base leadership has a positive impact on employee work-related flow.

2.3. The Mediating Role of Perceived Stress

The cognitive appraisal theory of stress explores how individuals perceive and evaluate stressors, examining the differences in responses to stress. This theory emphasizes that individuals, when facing stress, conduct primary and secondary evaluations of the stressor, forming a comprehensive understanding of it. In the primary appraisal stage, individuals assess whether the stressor threatens their goals or well-being, leading to either a challenge stressor or a hindrance stressor. In the secondary appraisal stage, individuals evaluate their ability to cope with the stressor and the available coping strategies [19]. When individuals perceive a potential threat, perceived stress arises, manifesting as psychological responses such as tension and a sense of loss of control. The perception of stress is influenced by both environmental and individual factors, which determine the subjective feeling of stress and subsequent behavioral responses [32]. Secure base leadership creates a caring and motivating work environment, establishing mutual trust and improving employees' mental models, enhancing their psychological capital and work identity [6]. The support provided by secure base leadership helps employees perceive less stress when facing stressful events. Specifically: First, secure base leadership provides resources and assistance, enhancing employees' work identity, trust, and willingness to take risks, thus reducing feelings of tension and loss of control, and decreasing the perceived level of stress [38,39]. Second, by encouraging employees to take risks, pursue personal growth, and adjust their mental models, secure base leadership helps them view stressful events positively, thereby reducing physical and emotional exhaustion and, to some extent, decreasing perceived stress [40]. Third, by granting employees more autonomy, allowing them to control their work pace and use resources to achieve goals, secure base leadership alleviates resistance and stress during the task process, increasing work vitality [41,42]. In summary, secure base leadership optimizes the work environment and mental models, exerting a positive influence that generates positive emotions in employees, reduces their perceived stress, and increases their work enthusiasm, ultimately fostering work-related flow[43].

According to cognitive appraisal theory, stress is not directly triggered by external events, but by an individual's cognitive evaluation of stressors, which leads to psychological responses[44]. In stress events, when employees perceive challenge stressors, they exhibit positive emotions and behaviors, enhancing work-related flow[45]. First, when employees perceive less stress, they view work tasks as challenges rather than threats, mobilizing personal resources to cope with them [46]. Viewing tasks as a balance between skill and challenge, they anticipate success and the resulting sense of achievement and external recognition,

motivating them to invest more time and energy, maintaining high levels of work-related flow [47,48]. Moreover, the less stress employees perceive, the more they can enhance their enjoyment of work in a positive organizational atmosphere and interpersonal relationships, further promoting work-related flow[49]. Finally, in the secondary appraisal stage, if employees believe they have the necessary abilities to cope with tasks and that the outcomes are beneficial to personal development, their perceived stress decreases further. At this stage, employees view stress as an opportunity for growth and development, stimulating intrinsic motivation and proactive coping behavior, which further enhances work-related flow[50,51].

In summary, leadership behavior influences employees' perception of stress in the work environment, which in turn affects their work-related flow. Secure base leadership, as a positive leadership style, provides support and encourages employees to take risks, helping reduce perceived stress, increasing work enthusiasm, and driving employees to engage more actively in their work, ultimately enhancing work-related flow[52].

Based on this, the following hypotheses are proposed:

Hypothesis 2: Secure base leadership has a negative impact on employees' perceived stress.

Hypothesis 3: Perceived stress has a negative impact on employee work-related flow.

Hypothesis 4: Perceived stress mediates the relationship between secure base leadership and employee work-related flow.

2.4. The Moderating Role of Emotional Intelligence

The concept of Emotional Intelligence (EI) has found extensive applications in the fields of management, psychology, and behavioral science. Emotional intelligence is defined as the ability of an individual to recognize and understand their own emotions as well as the emotions of others, and to use this information to guide their thoughts and actions. Specifically, EI encompasses the ability to self-motivate emotionally, manage one's own emotions, and regulate emotions in interpersonal relationships [53]. An individual's level of emotional intelligence, i.e., their capacity to recognize, regulate, and utilize emotions, directly influences their behavioral performance, which in turn affects their work performance [54].

Emotional intelligence not only affects how individuals perceive external environments, but also influences the perception, integration, and adjustment of their own emotions. In the workplace, emotional intelligence can affect employees' behavioral regulation [11]. When faced with stress, different employees may exhibit varying emotional and behavioral responses, depending on their level of emotional intelligence. Employees with high emotional intelligence are typically better at adjusting their emotions, coping with stress, and transforming it into positive energy. This allows them to maximize work resources and complete tasks efficiently [55]. In contrast, employees with low emotional intelligence tend to magnify stress, becoming irritable and anxious, and find it difficult to effectively manage negative emotions and stress in a complex work environment [56].

Emotional intelligence plays a regulatory role in the interaction between individuals and their external environment. According to the cognitive appraisal theory of

stress, stress arises from the interaction between the individual and their environment, and both situational and individual factors influence the individual's perception of stress [32]. As a personal trait, emotional intelligence affects how an individual appraises stress, thereby modulating its impact on work-related flow [19]. Specifically, individuals with high emotional intelligence can quickly perceive their emotions, regulate negative emotions, and, when faced with stressful events, typically appraise stress as a challenge. They gather the necessary information and resources, reduce perceived stress, and transform stress into motivation, thereby enhancing work-related flow [55]. On the other hand, individuals with lower emotional intelligence are more likely to view stress as an obstacle, struggle to adjust their emotions, and may experience decreased work-related flow, negatively affecting their work immersion [57].

Based on this, the following hypothesis is proposed:

Hypothesis 5: Emotional intelligence moderates the relationship between perceived stress and employee work immersion. The higher the level of emotional intelligence, the weaker the negative relationship between perceived stress and employee work immersion.

2.5. The Moderated Mediation Effect

Building on the previous discussion and hypotheses, this study posits that emotional intelligence can moderate the mediating effect of perceived stress. In stressful environments, emotional intelligence influences an individual's ability to

cope with stress. Individuals with high emotional intelligence are better able to regulate their emotions, adjusting both their emotional and cognitive responses to enhance their adaptability, thereby improving their ability to cope with stress [58]. Specifically, emotional intelligence moderates the negative relationship between perceived stress and employee work immersion. High emotional intelligence can weaken the negative impact of perceived stress on employee work immersion. As this negative effect diminishes, the mediating effect of perceived stress on work immersion also weakens. In other words, at higher levels of emotional intelligence, the negative relationship between perceived stress and employee work immersion becomes weaker, reducing the mediating effect of perceived stress. Conversely, at lower levels of emotional intelligence, the negative relationship between perceived stress and work immersion is more pronounced, thereby strengthening the mediating effect of perceived stress.

Based on this, the following hypothesis is proposed:

Hypothesis 6: Emotional intelligence moderates the mediating effect of perceived stress in the relationship between secure base leadership and employee work immersion. Specifically, the higher the level of emotional intelligence, the weaker the indirect relationship between secure base leadership and employee work immersion through perceived stress.

In summary, the theoretical model of this study is illustrated in Figure 1.

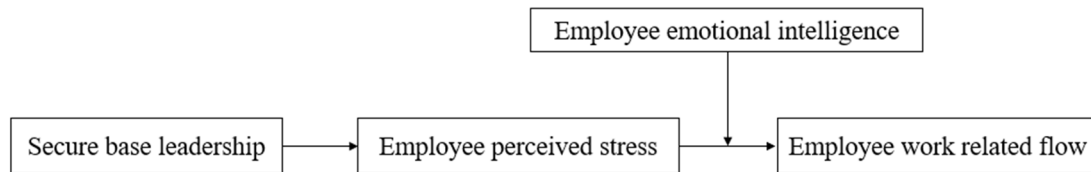


Figure 1. Theoretical model

3. Methods

3.1. Data Collection and Sample

This study examines the impact of secure base leadership on employee work immersion, utilizing an online survey to collect data. The sample consists of employees from companies across various regions of the country, including both regular employees and managers at different levels. Data collection for the survey took place from December 2023 to January 2024, with a total of 605 questionnaires distributed and 568 valid responses returned.

In the sample, the gender distribution is as follows: 15.8% male and 84.2% female. In terms of age, 68.0% are 25 years old or younger, 28.5% are between 26 and 35 years old, 2.8% are between 36 and 45 years old, and 0.7% are between 46 and 55 years old. Regarding education level, 4.4% have a college degree or below, 54.4% have a bachelor's degree, and 41.2% have a master's degree or higher. In terms of work experience, 85.4% have 3 years or less, 13.2% have between 3 and 10 years, and 1.4% have more than 10 years. In terms of job position, 75.7% are regular employees, 18.1% are frontline managers, 5.3% are middle-level managers, and 0.9% are senior managers.

3.2. Measurements

The variables and measurement scales used in this study

are well-established and frequently used in both domestic and international research. These scales have been widely applied in academic studies. The study adopts a Likert-7 point scale, with a range from 1 to 7, representing responses from "strongly disagree" to "strongly agree."

1. Secure Base Leadership: This scale was developed by Wu and Parker and includes 9 items [7]. Representative items include: "When I have difficult tasks or responsibilities, my supervisor provides encouragement and support," and "My supervisor encourages me to decide on the best way to complete tasks or achieve goals." In this study, the Cronbach's α for this scale is 0.837.

2. Perceived Stress: This scale was developed by Cohen et al. and includes 14 items [59]. Representative items include: "I feel that I am unable to control important things in my life," and "I can successfully handle annoying life hassles." In this study, the Cronbach's α for this scale is 0.885.

3. Emotional Intelligence: This scale was developed by Wong and Law and includes 16 items [60]. Representative items include: "I am very aware of my emotions," and "I can control my temper when I am faced with difficulties." In this study, the Cronbach's α for this scale is 0.876.

4. Work-related flow: This scale was developed by Bakker and includes 13 items [61]. Representative items include: "When I am working, I don't want to do anything else," and "My work gives me a great sense of accomplishment." In this study, the Cronbach's α for this scale is 0.914.

5. Control Variables: Based on previous research, this study controls for the employees' age, gender, education level, job position, and years of work experience [8-11, 62].

4. Data Analysis and Results

4.1. Common Method Bias Test and Confirmatory Factor Analysis

Based on previous studies, this research conducted a common method bias test and confirmatory factor analysis (CFA). First, the Harman's single-factor method was used to test for common method bias by performing a factor analysis on all items of the four variables in the questionnaire. The

results of this test indicated that the first factor, before rotation, explained 25.254% of the variance, which is well below the critical threshold of 40%. This suggests that common method bias was effectively controlled.

Next, this study employed AMOS 24.0 software to conduct CFA on the variables. The results are shown in Table 1. As can be seen from Table 1, the four-factor model ($\chi^2/df = 2364.859$, CFI = 0.914, TLI = 0.905, RMSEA = 0.041) demonstrated the best fit compared to the other three competing models. All fit indices of the four-factor model were significantly better than those of the other models, indicating that the variables have good discriminant validity and that the model is suitable for subsequent hypothesis testing.

Table 1. Results of the confirmatory factor analysis

Model	χ^2	df	χ^2/df	CFI	TLI	RMSEA
Four-factor model (SBL, PSS, EI, WRF)	2364.859	1200	1.971	0.914	0.905	0.041
Three-factor model (SBL+EI, PSS, WRF)	3143.837	1212	2.594	0.858	0.844	0.053
Two-factor model (SBL+EI, PSS+WRF)	4566.886	1247	3.662	0.756	0.74	0.069
single-factor model (SBL+PSS+EI+WRF)	6027.617	1255	4.803	0.649	0.629	0.082
Note: SBL denotes Secure Base Leadership; PSS denotes Perceived Stress; EI denotes Emotional Intelligence; and WRF denotes Work-related flow						

4.2. Descriptive Statistics and Correlation Analysis

In this study, SPSS 27.0 was used to analyze the relevant data, and the correlation coefficients between variables are presented in Table 2. The results in Table 2 show that: secure

base leadership is significantly positively correlated with work-related flow ($r = 0.426$, $P < 0.01$); secure base leadership is significantly negatively correlated with perceived stress ($r = -0.126$, $P < 0.01$); perceived stress is significantly negatively correlated with work-related flow ($r = -0.562$, $P < 0.01$). These findings provide preliminary support for the hypotheses proposed in this study.

Table 2. The mean, standard deviation, and correlation coefficient of the main variables.

Variables	Mean	SD	1	2	3	4	5	6	7	8
1. Gender	1.160	0.365								
2. Age	1.360	0.575	0.272**							
3. Education Level	2.370	0.567	0.010	0.077						
4. Tenure	1.160	0.414	0.250**	0.591**	-0.172**					
5. Job Hierarchy	1.310	0.612	0.172**	0.288**	0.033	0.308**				
6. Secure Base leadership	5.396	0.770	0.060	0.047	0.105*	-0.004	0.086*			
7. Perceived Stress	6.259	1.934	-0.071	0.005	0.039	0.040	-0.006	-0.126**		
8. Work-Related Flow	5.285	0.941	0.101*	0.025	-0.002	0.016	0.034	0.426**	-0.562**	
9. Emotional Intelligence	5.570	0.672	0.015	0.002	0.136**	-0.083*	0.022	0.488**	-0.303**	0.515**
NOTE: * $p < 0.05$, ** $p < 0.01$										

4.3. Main Effect and Mediating Effect Test

To test the hypothesized model, this study used SPSS 27.0 software to examine the main effects and mediating effects, with the hierarchical regression results presented in Table 3. As shown in Model 4 of Table 3, secure base leadership has a significant positive effect on employees' work-related flow ($\beta = 0.427$, $P < 0.001$), thus supporting Hypothesis 1. In Model 2, it is shown that secure base leadership significantly negatively affects employees' perceived stress ($\beta = -0.127$, $P < 0.01$), which supports Hypothesis 2. In Model 5, perceived

stress is found to significantly negatively affect employees' work-related flow ($\beta = -0.516$, $P < 0.001$), thus supporting Hypothesis 3. Together, the results of Hypotheses 1, 2, and 3 suggest that perceived stress partially mediates the relationship between secure base leadership and employees' work-related flow, thereby supporting Hypothesis 4.

Based on the mediation model 4, this study further employed the Bootstrap plugin of the PROCESS 4.1 program to conduct 5000 random samples to verify the mediating effect. The direct effect of secure base leadership on employees' work-related flow was found to be 0.443, with a

confidence interval of [0.366, 0.520], excluding 0, indicating a significant direct effect. After incorporating perceived stress as the mediating variable, the indirect effect was 0.080, with

a confidence interval of [0.025, 0.139], excluding 0, indicating a significant indirect effect. Thus, Hypothesis 4 is further supported.

Table 3. Results of stratified regression tests

	Perceived Stress		Work-related flow				
	Model 1	Model 2	Model 3	Model 4	model 5	model 6	Model 7
Control variable							
Gender	-0.082	-0.076	0.101	0.079	0.040	0.054	0.045
Age	-0.042	-0.038	0.003	-0.009	-0.028	-0.03	-0.026
Education level	0.059	0.071	-0.005	-0.045	-0.009	-0.023	-0.028
Tenure	0.099	0.094	-0.019	-0.002	0.047	0.065	0.058
Job Hierarchy	-0.012	-0.002	0.022	-0.012	-0.013	0.003	0.000
Independent variable							
Secure base leadership		-0.127**		0.427***	0.362***		
Mediator variable							
Perceived Stress					-0.516***	-0.442***	-0.410***
Moderator variable							
Emotional Intelligence						0.389***	0.364***
Interactive effect							
Perceived Stress *Emotional Intelligence							0.147***
R ²	0.012	0.028	0.011	0.19	0.448	0.455	0.474
ΔR^2	0.012	0.016	0.011	0.179	0.258	0.133	0.019
F	1.407	2.700*	1.217	21.869***	64.894***	66.759***	63.026***

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

4.4. Adjustment Effect Test

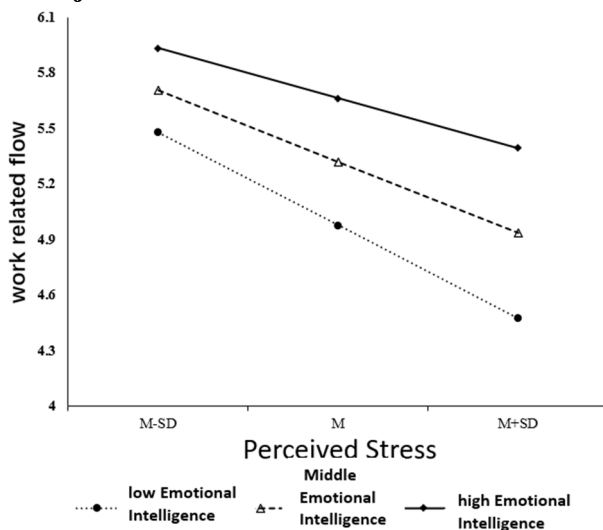


Figure 2. The moderating effect of Emotional Intelligence

For the moderating effect hypothesis, this study created an interaction term by multiplying the centered variables of perceived stress and emotional intelligence. Subsequently, control variables, perceived stress, and emotional intelligence were sequentially introduced, followed by the interaction term. The results are presented in Table 3. As shown in Model 5 of Table 3, perceived stress has a significant negative effect on employees' work-related flow ($\beta = -0.516$, $P < 0.001$). In Model 7, the interaction term between perceived stress and emotional intelligence has a significant positive effect on employees' work-related flow ($\beta = 0.147$, $P < 0.001$). It is

evident that the direction of the regression coefficient for the interaction term is opposite to that for perceived stress in relation to work-related flow. Specifically, emotional intelligence negatively moderates the relationship between perceived stress and work-related flow, meaning that higher emotional intelligence weakens the negative relationship between perceived stress and employees' work-related flow. Therefore, Hypothesis 5 is supported.

To visually illustrate the moderating effect, this study also plotted simple slope graphs to demonstrate the role of emotional intelligence in moderating the relationship between perceived stress and employees' work-related flow. The relevant moderating effects are shown in Figure 2. The results indicate that when emotional intelligence is low, perceived stress has a significant negative impact on employees' work-related flow ($\beta = -0.259$, $P < 0.001$). However, when emotional intelligence is high, the negative impact of perceived stress on work-related flow is reduced ($\beta = -0.140$, $P < 0.001$). Compared to low levels of emotional intelligence, high levels of emotional intelligence more effectively weaken the negative influence of perceived stress on work-related flow. Thus, Hypothesis 5 is further supported.

4.5. Moderated Mediation Effect

To test the moderated mediation effect in the proposed research model, this study used the PROCESS 4.1 macro for verification, based on mediation model 14. The mean of emotional intelligence was adjusted by adding and subtracting one standard deviation to define high and low levels, and the mediation effect and confidence intervals were calculated using 5000 bootstrap samples. The detailed results are shown in Table 4.

As seen in Table 4, when emotional intelligence is at a high level, the indirect effect of secure base leadership on employees' work-related flow through perceived stress is 0.045, with a 95% confidence interval of [0.012, 0.085], which does not include 0, indicating a significant mediation effect. When emotional intelligence is at a low level, the

indirect effect of secure base leadership on employees' work-related flow through perceived stress is 0.083, with a 95% confidence interval of [0.026, 0.146], also excluding 0, indicating a significant mediation effect. These findings suggest that employees' emotional intelligence weakens the mediating effect of perceived stress, supporting Hypothesis 6.

Table 4. Moderation of the mediating effect

Moderator variable	Path: secure base leadership → Perceived Stress → work-related flow			
	Effect	SE	Boot LLCI	Boot ULCI
Emotional Intelligence				
Low(-1SD)	0.083	0.031	0.026	0.146
High(+1SD)	0.045	0.019	0.012	0.085

5. Discussion and Conclusion

5.1. Conclusion

The main conclusions of this study are as follows: Secure base leadership has a positive impact on employees' work-related flow; secure base leadership has a negative impact on employees' perceived stress; perceived stress has a negative impact on employees' work-related flow; perceived stress mediates the relationship between secure base leadership and employees' work-related flow; emotional intelligence negatively moderates the effect of perceived stress on work-related flow, meaning that the higher the employees' emotional intelligence, the less perceived stress they experience, which in turn enhances their work-related flow; emotional intelligence also negatively moderates the mediation effect of perceived stress in the relationship between secure base leadership and employees' work-related flow, such that the higher the emotional intelligence, the weaker the indirect relationship between secure base leadership and employees' work-related flow through perceived stress.

5.2. Theoretical Contributions

In the field of organizational management, research on work-related flow is still in its early stages. This study, based on the Stress Cognitive Appraisal Theory, explores the relationship between secure base leadership and employee work-related flow, expanding the research on the antecedents of work-related flow. Currently, most studies on work-related flow focus on the healthcare sector, with relatively few studies in the business context [63,64]. Existing research is gradually shifting from individual factors, such as personality, motivation, emotions, and job demands and resources, to a focus on environmental factors such as organizational climate and leadership behavior that influence work-related flow [13]. Some scholars have explored the role of authentic leadership [65] and platform leadership [15] in employee work-related flow, with most of these studies being grounded in self-determination theory and flow theory. This study, however, uses Stress Cognitive Appraisal Theory to validate the impact of secure base leadership on employee work-related flow, thereby enriching the research on the antecedents of work-related flow.

Furthermore, this study enriches the research on the outcomes of secure base leadership based on Stress Cognitive Appraisal Theory. Existing studies typically explore the impact of secure base leadership on employee helping behaviors [10], innovative behaviors [8], creativity [9], and voice behaviors [62] from the perspectives of resource

conservation theory, attachment theory, and creativity leadership theory. However, research on secure base leadership is still relatively scarce. This study, by exploring the cognitive appraisal process of stress, analyzes the mechanism through which secure base leadership affects employee work-related flow, thereby broadening the research on secure base leadership.

This study introduces employee perceived stress as a mediating variable in the relationship between secure base leadership and employee work-related flow, thereby enriching the process theory of secure base leadership. While previous research has identified mediators such as psychological safety, psychological capital, and thriving at work, this study extends the theoretical framework by incorporating perceived stress, enhancing our understanding of the mechanisms at play. Furthermore, by applying Stress Cognitive Appraisal Theory to the leader-employee interaction, this study contributes valuable insights to the field.

Finally, this study introduces emotional intelligence as a moderating variable to explore its moderating effect on the relationship between perceived stress and work-related flow. Previous research has pointed out that moderating variables such as attachment style [62], regulatory focus [10], and uncertainty avoidance [9] can affect the mediating mechanisms of secure base leadership. Individual differences, such as the clarity, intensity, and focus of emotional intelligence, may lead to differences in how individuals perceive stress [66]. In this regard, this study adds emotional intelligence as a relevant contextual variable, enriching the theoretical research in this area.

5.3. Practical Insights

According to the research findings, the management implications of this study are primarily reflected in the following aspects:

Secure Base Leadership Promotes Employee Work-related flow. Organizational leaders should enhance employees' emotional commitment and work-related flow. This can be achieved by establishing effective communication channels, reward systems, and feedback mechanisms. Managers should also provide emotional and resource support to employees, empowering them to find fulfillment in their work, thereby fostering work-related flow. Encouraging employee growth and stimulating intrinsic motivation will further strengthen work focus.

Cultivating Emotional Intelligence to Enhance Stress Management. Organizations should invest in developing employees' emotional intelligence to improve their ability to cope with stress. Managers should focus on emotional regulation, interpersonal skills, and problem-solving abilities

through training and interventions. During recruitment and task assignments, emotional intelligence should be considered to match employees with appropriate roles. Feedback approaches should be adjusted based on employees' emotional intelligence to enhance management effectiveness.

Focusing on Employee Psychological Well-being. Organizations should pay attention to employees' psychological health, take measures to alleviate perceived stress, and enhance employees' overall well-being. Managers can set up counseling rooms, regularly monitor employees' mental states, provide psychological counseling, and encourage stress relief. Organizing physical activities and other stress-relief initiatives can help employees manage pressure, while ensuring that they have sufficient work resources to cope with job-related stress.

These managerial suggestions underscore the importance of leadership, emotional intelligence, and psychological well-being in fostering a productive and engaged workforce.

5.4. Limitations and Future Prospects

This study has several limitations. First, it focuses solely on the impact of secure base leadership on employee work-related flow. Future research could explore its effects on other behaviors, such as bootleg innovation, resilience, and job crafting, as well as its influence on team or organizational outcomes like performance, innovation, and resilience. Second, the study examines the influence mechanism through the lens of stress appraisal theory. Future research could expand this analysis using alternative theoretical frameworks. Additionally, only stress perception is considered as a mediating variable; other potential mediators, such as psychological detachment, autonomous motivation, and leader's mindset, could be explored. Lastly, while emotional intelligence is considered a moderating variable, other boundary conditions, such as error management climate, organizational culture, and team atmosphere, warrant further investigation.

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