

# Better Match, Better Career: Comparing the Mediating Effects of Demands-Abilities Fit and Needs-Supplies Fit between Career Exploration and Career Satisfaction

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**Abstract:** In the boundaryless career era, employees tend to focus on their own needs and what they can obtain from jobs to make wise career choices and achieve a high level of career satisfaction. Using a sample of 230 Chinese employees, this study investigated the mediating effect of demands-abilities fit and needs-supplies fit in the relationship between career exploration and career satisfaction and compared the mediating effects of these two types of person-job fit. This study found that: 1) employees could achieve a higher level of career satisfaction by conducting more career exploration behaviors; 2) both demands-abilities fit and needs-supplies fit mediated the relationship between career exploration and career satisfaction; 3) the mediating effect of needs-supplies fit was stronger than that of demands-abilities fit. Theoretical and practical applications were also discussed.

**Keywords:** Career exploration; person-job fit; demands-abilities fit; needs-supplies fit; career satisfaction

## 1 Introduction

Work provides individuals resources to survive, accesses to relational connections, the experience of control over their lives, and therefore influences psychological health [1]. If individuals and their jobs are compatible, then a fit is achieved and positive outcomes often occur, such as positive work attitudes, job satisfaction, organizational commitment, and employee well-being [2–7]. Person-job fit refers to the consistency or the degree of matching between an individual's characteristics and those of the job [8]. The advent of boundaryless careers and increasingly autonomous of jobs have turned employees' attention to their personal requirements and the job features, such as the salary package, job duties, and promotion opportunities. Person-job fit is now considered as a wise career choice, leading to a high level of career satisfaction [3,9].

In career worlds, explorational behaviors may enhance the alignment between employees' vocational identities and their jobs [10]. Previous research has found the positive linkage between career exploration and person-job fit. As "purposive behavior and cognitions that afford access to information about occupations, jobs, organizations that was not previously in the stimulus field" (p. 192) [11], career exploration people's attitudes, behaviors, and career outcomes [12–14]. During the process of career exploration, individuals seek information from different sources to get a better understanding of themselves and the environment [15]. In current changing world, career exploration has been viewed as an important prerequisite for career adaptability [16] and career success [17] Theoretically, explorations of personal and



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contextual attributes could lead to a fit between the self and the working environment, promoting positive career related attitudes and feelings, such as career satisfaction [18]. However, little has been directed toward the mediating effect of person-job fit in the relationship between career exploration and career satisfaction.

Previous studies indicated that person-job fit should take two aspects into consideration: demands-abilities (D-A) fit and needs-supplies (N-S) fit [20–22]. Demands-abilities fit refers to the correspondence between a worker's skills and the requirements from the job, while needs-supplies fit indicates the congruence between employees' needs and the supplies they receive from their jobs. Both two types of fit may increase employees' career satisfaction. Apart from examining the mediating effect of D-A fit and N-S fit in the relationship between career exploration and career satisfaction simultaneously, we would also compare the significance of these two paths.

This study contributes to the existing literature in the following ways. First, we empirically test Holland's [18] assumption that career exploration would contribute to career satisfaction through the mediating role of person-job fit. In order to get a deeper understanding of person-job fit, we examine the mediating role of N-S fit and D-A fit simultaneously in a multi-mediation model. Therefore, another contribution of the present study is to reveal that which aspect of person-job fit could provide a more explanatory power in promoting career satisfaction by comparing these two mediating mechanisms. This research enriches the literature in person-job fit and offers practical implications for both career educators and consultants.

## **2 Hypotheses Development**

### ***2.1 The Relationship between Career Exploration and Career Satisfaction***

As a core construct in the field of career development [11,23], career exploration refers to “purposive behavior and cognitions that afford access to information about occupations, jobs, organizations that was not previously in the stimulus field” (p. 192) [11]. Career exploration is divided into self-exploration and environmental exploration. Individuals will have a profound understanding of their career values, vocational interests, personal attributes and abilities when conducting self-exploration. When exploring the external environment, people will build social ties to acquire career opportunities and deal with challenges [24].

In this process, individuals will foster affective reaction towards the information obtained by career exploration [11,12]. Therefore, they will have a more positive feeling towards their careers by acquiring more information through career exploration. Thus, more career exploration people conduct, more career satisfaction they will acquire. The relationship between career exploration and career satisfaction received relatively less attention. Whereas empirical studies provided evidences for the relationship between career exploration and job satisfaction. For example, Werbel [25] found that when graduating college students conducted more career exploration, they also engaged in job searching more frequently and industriously, and this would further promote job satisfaction in the early career stage.

Based on these ideas, we proposed the following hypothesis:

*H1: Career exploration has a positive relationship with career satisfaction.*

### ***2.2 The Mediating Role of Person-Job Fit***

Person-job fit refers to individuals' congruence with job requirements and the retributions to perform it [26–28]. Person-job fit is usually divided into two distinct types, namely, demands-abilities fit and needs-supplies fit [29]. Demands-abilities fit refers to the matching degree between job demands and individuals' abilities, knowledge and skills. Needs-supplies fit refers to the degree of which the job satisfies the needs and preferences of employees [20,30].

Both career self-exploration and career environmental exploration have been found to cultivate individuals' awareness of person-job fit [10]. Career exploration deepens individuals' understanding of themselves and the world-of-work and enhances their career decision-making self-efficacy [31–34], enabling the alignment between employees and their jobs. As two forms of complementary fit [35,36],

demands-abilities fit and needs-supplies fit represent what individuals and environment provide and require from each other [27,28,37]. As a result, the mediating effects of these two types of fit differ from each other.

During career environmental exploration, individuals seek for information from different sources to get a better understanding of the requirements and demands of various jobs vacancies [31]. Meanwhile, career self-exploration helps individuals gain more knowledge and resources to develop their working skills and abilities, further increasing their employability [38–40]. Therefore, for the individuals in job searching process, career exploration behaviors assist them to find qualified jobs, indicating a high level of D-A fit. On the other hand, for those who already have jobs, career exploration activates help them reevaluate their capabilities and the job requirements. If they feel a lack of competencies to do the job, they will give up the job and chase for other job opportunities which fit them better. On the contrary, if employees feel that their abilities are sufficient to do the job, they will perceive more person-job fit after taking this job. Therefore, employees will perceive a high level of D-A fit after career exploration.

Also, career environmental exploration enables people to gain more occupational information to make themselves better adapt to the challenging labor market and find a career which fits with their needs [41,42]. Career self-exploration helps individuals to construct and reconstruct a sense of self, clarify what they want from their jobs, and develop career identity [12,42]. With more accurate understanding of themselves, people are more capable to choose the jobs that meet their needs. Moreover, gathering more occupational information, individuals could abandon the jobs which cannot satisfy their needs and seek for other job opportunities. In the end they will accept jobs which can provide them what they want, improving N-S fit.

Previous studies have found the significant effect of person-job fit on individuals' attitude towards work [3,43] as career exploration could align employees' career identities and their career contexts [10,44]. The effects of D-A fit and N-S fit on career satisfaction may also exert in different ways. If individuals perceive a high level of demands-abilities fit, they will have more self-efficacy in doing the job [45], which could further improve career satisfaction [46].

In the aspect of needs-supplies fit, demands-satisfaction theory holds the view that employees will have positive work attitudes when their needs are satisfied [47,48]. This is in line with person-job fit theory, which considers that shared values between organizations and individuals could bring about favorable outcomes such as positive attitude towards one's job or career [49,50]. As a result, a high level of needs-supplies fit could also improve employees' career satisfaction.

Therefore, we put forward the following hypothesis:

*H2: Demands-abilities fit mediates the relationship between career exploration and career satisfaction.*

*H3: Needs-supplies fit mediates the relationship between career exploration and career satisfaction.*

### 3 Method

#### 3.1 Data and Sample

Participants in this study were all employees in enterprises. They chose to take part in the survey voluntarily and could quit the survey freely. Data was collected at one time point. We delivered a total of 500 questionnaires and received 230 valid responses (17.80% male). The effective rate of this study was 46.00%. The average age was 21.91 (SD = 0.89).

#### 3.2 Measures

##### 3.2.1 Career Exploration

Career exploration was measured by the self-exploration subscale and the environmental exploration subscale in career exploration scale (CES) [11]. The Chinese version of these subscales were validated in previous studies [51]. Participants rated the extent to which they have behaved in the following ways over the last 3 months. The self-exploration subscale had 5 items and a sample item was: "Been retrospective in thinking about my career". The environmental exploration subscale had 6 items and a sample item was:

“Went to various career orientation programs”. Participants rated on a 5-point Likert scale from 1 = *little* to 5 = *a great deal*. The Cronbach’s alpha was 0.92.

### 3.2.2 Person-Job Fit

We used items created by Cable et al. [20] to measure two types of person-job fit: demands-abilities fit and needs-supplies fit. Three items measuring demands-abilities fit were “There is a good fit between what my job offers me and what I am looking for in a job,” “The attributes that I look for in a job are fulfilled very well by my present job,” and “The job that I currently hold gives me just about everything that I want from a job.” Three items measuring needs-supplies fit were “The match is very good between the demands of my job and my personal skills,” “My abilities and training are a good fit with the requirements of my job,” and “My personal abilities and education provide a good match with the demands that my job places on me.” These two measurements had good reliability and validity [20,30]. The Cronbach’s alpha of demands-abilities fit and needs-supplies fit was 0.89 and 0.79 respectively. The Cronbach’s alpha of all items was 0.86.

### 3.2.3 Career Satisfaction

Career satisfaction was measured with a widely-used scale by Greenhaus et al. [52]. The Chinese version of this scale was tested and validated using Chinese samples [53,54]. Participants responded to 5 items on a 7-point Likert scale ranging from 1 = *strongly disagree* to 5 = *strongly agree*. A sample item of this scale was “I am satisfied with the progress I have made towards meeting my goals for income.” The Cronbach’s alpha for this scale was 0.92.

### 3.2.4 Control Variables

According to previous studies [55], gender had a significant relationship with career satisfaction. Besides, in Chan et al. [54], the effect of age was controlled in data analysis. As a result, this study also controlled for the effect of gender and age.

## 4 Results

### 4.1 Test of Common Method Bias

This study collected data at one time point, so it was possible that common method bias could be a problem. As a result, we adopted Harman’s single-factor test to examine common method bias [56]. The result of Harman’s single-factor test showed that after loading all the items into one factor, the first factor accounted for 39.10% (< 40%) of total variance, indicating that there was no single factor could explain the majority of the total variance. In this case, common method bias should not be a problem in this study.

### 4.2 Description Statistics and Correlations

Tab. 1 showed the description statistics and correlations among variables in this study. In Tab. 1, career exploration had a significant positive relationship with career satisfaction ( $r = 0.40$ ,  $p < 0.001$ ), supporting Hypothesis 1. Besides, main variables in this study were all positively related to each other.

**Table 1:** Descriptive statistics and correlations ( $N = 230$ )

	Variables	Mean	SD	1	2	3	4	5
1	CE	3.15	0.87	—				
2	D-A Fit	3.64	0.87	0.32***	—			
3	N-S Fit	3.67	0.89	0.40***	0.72***	—		
4	CS	4.74	1.27	0.40***	0.54***	0.58***	—	
5	Gender	—	—	-0.10	0.08	0.08	0.03	—
6	Age	21.91	0.89	-0.02	0.09	0.05	0.04	0.07

**Notes.** \*\*\*  $p < 0.001$ . CE = career exploration. D-A Fit = demands-abilities fit. N-S Fit = needs-supplies fit. CS = career satisfaction.

### 4.3 Confirmatory Factor Analysis

The result of KMO test (KMO value = 0.92) and Bartlett's test of sphericity ( $p < 0.001$ ) indicated that the dataset was suitable for factor analysis. We conducted confirmatory factor analysis (CFA) to ensure the distinctiveness of the variables in this study using Mplus 7.4. Indices used to show the results of CFA included  $\chi^2$ , df,  $\chi^2/\text{df}$ , CFI (comparative fit index), TLI (Tucker-Lewis index), SRMR (standardized root-mean-square residual), and RMSEA (root mean square error of approximation) [57,58]

Tab. 2 depicted CFA results. In Tab. 2, four-factor model fit with the data best, with  $\chi^2 = 333.26$ ,  $\text{df} = 224$ ,  $\chi^2/\text{df} = 1.49$ , CFI = 0.95, TLI = 0.95, SRMR = 0.05, RMSEA = 0.05. Therefore, the variables in this study had a good discriminant validity.

**Table 2:** Results of CFA ( $N = 230$ )

Models	$\chi^2$	df	$\chi^2/\text{df}$	CFI	TLI	SRMR	RMSEA
Four-factor model	333.26	224	1.49	0.95	0.95	0.05	0.05
Three-factor model	568.05	227	2.50	0.85	0.84	0.11	0.08
Two-factor model	652.35	229	2.85	0.82	0.80	0.12	0.09
One-factor model	1240.20	230	5.39	0.56	0.52	0.14	0.14

**Notes.** Four-factor model = career exploration, demands-abilities fit, needs-supplies fit, career satisfaction. Three-factor model = career exploration + demands-abilities fit, needs-supplies fit, career satisfaction. Two-factor model = career exploration + demands-abilities fit, needs-supplies fit + career satisfaction. One-factor model = career exploration + demands-abilities fit + needs-supplies fit + career satisfaction.

### 4.4 Test of Hypotheses

We conducted hypotheses testing employing Model 4 of Process 3.4 and bootstrapping method [59]. We set the bootstrap sample size as 5000 and standardized all variables before data analysis.

Tab. 3 demonstrated the results of total effect. In total effect, career exploration was positively related to career satisfaction ( $\beta = 0.40$ ,  $p < 0.001$ ) and the 95% CI was [0.28, 0.52]. This result supported Hypothesis 1.

**Table 3:** Results of total effect ( $N = 230$ )

Variables and Statistics	Outcome: Career Satisfaction		
	$\beta$	SE	t
Career Exploration	0.40	0.06	6.63***
Gender	0.06	0.06	1.04
Age	0.04	0.06	0.69
R <sup>2</sup>		0.16	
F		14.83	

**Notes.** \*\*\*  $p < 0.001$ .

Tabs. 4 and 5 showed the results of indirect effects and the research model. According to Stages 1 and 2 in Tab. 4, career exploration had a positive relationship with both demands-abilities fit ( $\beta = 0.33$ ,  $p < 0.001$ ) and needs-supplies fit ( $\beta = 0.40$ ,  $p < 0.001$ ). In Stage 3, when demands-abilities fit and needs-supplies fit were added into the equation, career exploration was still significantly related to career satisfaction ( $\beta = 0.19$ ,  $p < 0.01$ ). And both demands-abilities fit and needs-supplies fit were positively related to career satisfaction ( $\beta = 0.23$ ,  $p < 0.01$ ;  $\beta = 0.34$ ,  $p < 0.001$ , respectively). In Tab. 5, both indirect effects of two types of person-job fit were significant as 95% CI did not include zero. Therefore, Hypothesis 2 and 3 were both supported. And it was evident that the effect of needs-supplies fit was significantly stronger than that of demands-abilities fit.

**Table 4:** Results of indirect effects ( $N = 230$ )

Variables and Statistics	Stage 1. Outcome: D-A Fit			Stage 2. Outcome: N-S Fit			Stage 3. Outcome: CS		
	$\beta$	$SE$	$t$	$\beta$	$SE$	$t$	$\beta$	$SE$	$t$
CE	0.33	0.06	5.35***	0.40	0.06	6.75***	0.19	0.06	3.29**
D-A Fit							0.23	0.07	3.11**
N-S Fit							0.34	0.08	4.37***
Gender	0.10	0.06	1.62	0.11	0.06	1.86	0.00	0.05	0.04
Age	0.09	0.06	1.42	0.05	0.06	0.83	0.00	0.05	0.09
R <sup>2</sup>	0.12			0.17			0.40		
F	10.64			15.89			29.43		

**Notes.** \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ . CE = career exploration. D-A Fit = demands-abilities fit. N-S Fit = needs-supplies fit. CS = career satisfaction.

**Table 5:** Test of indirect effects ( $N = 230$ )

Mediators	Effect	Boot SE	Boot LLCI	Boot ULCI
Demands-Abilities Fit	0.08	0.03	0.02	0.15
Needs-Supplies Fit	0.14	0.04	0.07	0.21

## 5 Discussion

### 5.1 Theoretical Implications

Employees in boundaryless career world are more likely to pursue jobs that are meaningful to themselves [60]. A better understanding of themselves and the work context will lead to positive career outcomes. This research aims to examine the mediation effect of person-job fit between career exploration and career satisfaction.

First, the findings reinforce the significance of career exploration in facilitating person-job fit, in line with the findings of Nie et al. [10], who investigated the relationship between career exploration and fit perception. Our results further proved that career exploration increased both D-A fit and N-S fit. On the one hand, career exploration could help individuals clarify their vocational interests and gather more information about the job rewards to reach N-S fit. On the other hand, individuals who engaged in career exploration could build their capabilities and competences to meet the requirements of the target job, increasing D-A fit.

Second, our results provided empirical evidence for the importance of career exploration as fundamental explanations of higher level of career satisfaction. In addition, this study revealed the underlying mechanism between career exploration and career satisfaction by examining the mediation roles of D-A fit and N-S fit simultaneously in a multi-mediation model.

A further purpose of this study was to explore which aspect of person-job fit had a stronger explanatory power. Compared with D-A fit, N-S fit had a stronger mediating effect in the relationship between career exploration and career satisfaction, indicating that the fit between employees' desires and tangible work rewards could generate higher level of career satisfaction than the fit between employees' skills and job requirements. The findings were consistent with earlier studies suggesting that N-S fit was the most important variable to career satisfaction [9]. Our results advanced the current understanding by examining the mediation effect of N-S fit between career exploration and career satisfaction.

## 5.2 Practical Implications

Translating the findings of this research into implications for practice suggests in the first place is that career satisfaction can be achieved by career exploration. For individuals, proactive exploring behaviors should be encouraged. They should grab every opportunity to gather information of the world-of-work and clarify their vocational interests and values to experience good person-job fit and consequently achieve career satisfaction. Achieving needs-supplies fit by identifying personal requirement and job rewards through career self-exploration and career environmental exploration seems to be a better strategy to improve career satisfaction. For career educators and counselors, they could diagnose the problems in career dissatisfaction and low level of person-job fit by testing employees' career exploration behaviors. They could also design career programs and workshops to provide vocational resources for employees to be engaged in career exploration activities.

## 5.3 Limitations and Orientations for Future Research

There are still several limitations of this study in spite of the theoretical and practical implications discussed above. First of all, the results showed that both D-A fit and N-S fit had partial mediating effects that influence the relationship between career exploration and career satisfaction, which meant that there could exist other mediators. Future research could delve into this relationship and find out other mediating mechanisms to explain the relationship between career exploration and career satisfaction. Second, this study only paid attention to person-job fit, whereas person-vocation fit and person-organization fit are both important constructs which can affect career success [2,61]. Future research could explore the effect of other kinds of fit. Finally, this study collected data at one time point. Although we ensured that common method bias was not a problem in this study, future research could adopt a more rigorous research design such as a longitudinal design to better avoid common method bias or an experimental design to test the causal links.

## 6 Conclusion

In the past decades, career exploration has been viewed as a central construct in career development. The aim of current study was to reveal the underlying mechanisms through which career exploration affects career satisfaction. The results showed that both demands-abilities fit and needs-supplies fit mediated the relationship between career exploration and career satisfaction, with needs-supplies fit providing a stronger explanatory power. The results offer directions for advancing the research in career exploration and person-job fit.

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