

The Effect of Person-Job Fit on Nurses' Engagement in the Context of COVID-19: The Mediating Role of Exemplary Role of Heroes in Harm's Way

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Abstract

Objective: to understand the status quo of nurse's person-job fit, nurse's engagement, and nurses' attitude towards the exemplary role of heroes in harm's way. To explore the relationship between person-job fit and nurses' engagement under the background of COVID-19, and the mediating role of the exemplary role of heroes in harm's way. In the context of COVID-19 and other major public health emergencies, it provides countermeasures for strengthening the matching degree between nurses and their work and enhancing nurses' engagement, so as to provide theoretical support for further demonstrating exemplary role of heroes in harm's way during the COVID-19 and major public health emergencies. **Methods:** in August 2020, 639 nurses were investigated with person-job fit scale, model demonstration scale and engagement scale. **Results:** person-job fit positively affected nurses' engagement and its dimensions, and the exemplary role of heroes in harm's way mediated the relationship between them. **Conclusion:** The degree of understanding and influence of the heroes in harm's way is different, and the influence degree of each variable is also different; the higher the level of person-job fit of nurses, the higher the degree of nurses' engagement. The exemplary role of heroes in harm's way will mediate the relationship between the two.

Key words: COVID-19; Person-Job Fit; Engagement; Exemplary Role of Heroes in Harm's Way; Mediating Role

1. Introduction

Recently, the COVID-19 swept the globe at an alarming rate, and it caused a strong impact on the safety of life and property in the world ^[1]. Worldwide, although COVID-19 has been basically controlled and grasps in China, there are still some imported cases and asymptomatic in some areas, and the global situation is still not optimistic ^[2-3]. As of August 28, 2020, Beijing time, the total number of confirmed cases has exceeded 24.62 million, and the total number of deaths is nearly 835000. As pointed out in the report on the work of the government of China in 2020, the COVID-19 is not over, and the development task is extremely arduous. Efforts should be made to minimize the losses caused by the epidemic. The WHO also said that the global epidemic is still accelerating and has not yet reached its peak.

During the outbreak of the COVID-19, nursing staffs were on the front line of epidemic prevention and rescue, they deal directly with novel coronavirus pneumonia patients and are at risk of being infected by disease at any time ^[4]. Because the COVID-19 is highly infectious, and has a fast transmission speed and wide spread range of ^[5], although nurses have certain nursing skills, medical and health knowledge and first aid ability, but compared to doctors with rich medical level and clinical experience, nurses are still prone to cause various psychological problems when facing a sudden outbreak of ^[6-7]. The occurrence of these psychological problems will make the nursing staffs feel at a loss, lack of self-confidence, and reduce the sense of psychological security when facing the COVID-19 ^[8]. Therefore, the mismatch and imbalance between nurses and their work will be highlighted.

Meanwhile, because the COVID-19 is highly infectious and highly hazardous, will it affect the work enthusiasm, enthusiasm, motivation and investment of nurses? Is it possible to choose to

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avoid work because of fear or worry about the adverse consequences of the COVID-19?

Person-job fit refers to the matching degree between the ability, knowledge, technology and other conditions of employees and the actual requirements of the post, and whether the post can meet the individual needs of employees ^[9]. Engagement refers to the extent to which employees are willing to be responsible for their own work. As a form of reward for obtaining various resources of the organization, engagement embodies the work responsibility and work engagement of employees ^[10]. To sum up, this study took nurses as the research object to understand the status quo of nurses' person-job fit, nurses'

engagement, and nurses' attitudes and views on the exemplary role of heroes in harm's way. Objective to explore the relationship between person-job fit and nurses' engagement under the background of COVID-19, and the mediating role of the exemplary role of heroes in harm's way. In the context of COVID-19 and other major public health emergencies, it provides countermeasures for strengthening the matching degree between nurses and their work and enhancing nurses' engagement, so as to provide theoretical support for further demonstrating the exemplary role of heroes in harm's way during the COVID-19 and major public health emergencies. Figure 1 shows the theoretical model of this study.

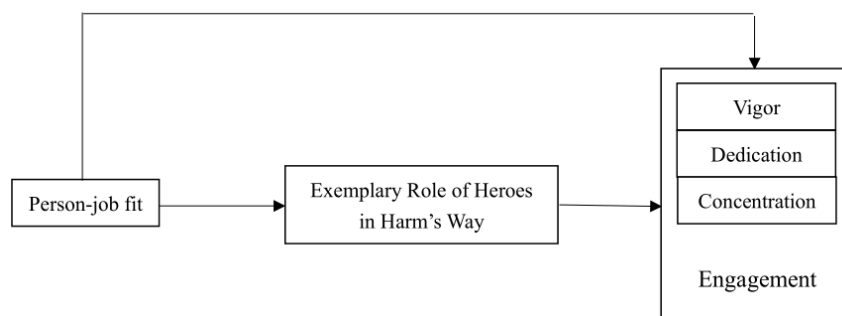


Figure 1. Theoretical model

2. Literature review

The concept of engagement was first proposed by American scholar Kahn at the end of the 20th century. Kahn first formally proposed the concept of engagement in 1990, he defined engagement as self-role management and self-cognitive expression, and emphasized that employees should devote themselves to work and pursue a best positive state ^[11]. This definition has attracted the attention and research of scholars at home and abroad. However, the concept of engagement proposed by Schaufeli in 2002 is widely accepted and widely used, he defined engagement as: it is a kind of work-related, pleasant, relatively lasting emotional experience. Under this emotional experience, employees can devote themselves to the work and actively undertake their own job responsibilities and tasks. The opposite of engagement is job burnout ^[12]. Schaufeli divides engagement into three dimensions: vigor, dedication and concentration. The characteristics of vigor are as follows: the flexibility and persistence of an individual in his work, the extent to which he remains energetic, the ability to deal with difficulties, and flexibility; the characteristics of dedication are as follows: to what extent can we

devote ourselves to the work, and then experience the value and significance brought by work, keep warm passion and challenge to the work all the time; the characteristics of concentration are as follows: to me, concentrate on work, immersed in the work is difficult to extricate themselves, feel the time passes very quickly. To sum up, employee engagement reflects a kind of work-related mental state of "positive dedication, courage to challenge, full of vitality, and wholehearted devotion" ^[13].

At present, most of the academic research on engagement takes engagement as the result variable, and the antecedent variables of engagement are mainly studied and discussed from three aspects of individual factors, organizational factors and work characteristics at home and abroad ^[14-15]. First of all, in terms of individual factors, scholar Ye Yindan pointed out in his research that the individual influencing factors of engagement mainly include personality characteristics and demographic variables. However, due to the difficulty in quantifying individual personality characteristics, the current research on individual factors of engagement mainly focuses on demographic variables, these demographic variables mainly include: gender, age,

work position, education background, etc. However, due to different scholars' different measurement tools and analysis methods for the variables of engagement and demography, there is no unified conclusion on demographic factors in academic circles at present ^[16]. Secondly, in terms of organizational factors, the influencing factors of engagement are mainly concentrated in three aspects: leadership style, fairness, reward and recognition. Xu Yan et al. Explored the relationship between leadership style and engagement through meta-analysis, and found that there was a significant positive correlation between empowerment leadership, ethical leadership, transformational leadership, leader member exchange, authentic leadership, transactional leadership, service leadership and paternalistic leadership, and the explanatory power of engagement decreased ^[17]. Qing Tao and others found that decent work has a positive effect on employee engagement ^[18]. Li Yabo et al. and Dong Linping et al. also confirmed the influence of interpersonal justice and procedural justice on employee engagement ^[19-20]. Finally, in terms of job characteristics, Liu Jinpei and others found that job burnout negatively affects engagement ^[21]. Kang Chaoqun and others have confirmed the predictive effect of work resources on the engagement of University Librarians ^[22].

In recent years, the theory of human environment matching has gradually attracted the attention of scholars at home and abroad. According to the theory, individual behavior will be affected by both individual and environment, and good matching between individual and environment can bring good attitude and behavior to individual ^[23]. As an important part of human environment theory matching, person-job fit has also attracted the attention of scholars at home and abroad. At present, the concept of person-job fit, which is widely accepted in academic circles, was proposed by Edwards in 1991. Edwards defined person-job fit as the matching degree between the ability, knowledge, technology and other conditions of an employee and the actual requirements of the post, and whether the post can meet the individual needs of the employee ^[24]. This concept includes two aspects: one is requirement ability matching, that is, whether the knowledge, skills and abilities possessed by an individual match the requirements of the post; the other is demand supply matching, that is, whether the money, resources and other rewards provided by work can meet the needs of individuals ^[25]. Therefore, person-job fit is usually affected by both individual and organizational

environment, and some scholars have also confirmed this view in research, and person job matching is usually positively correlated with positive results such as job satisfaction ^[26].

At present, there are many researches on person-job fit at home and abroad, and mainly focus on the antecedent variables and outcome variables. Results the research on the variables mainly focused on the relationship between person-job fit and job performance, individual creativity and innovative behavior, job satisfaction, job burnout, turnover intention, job engagement and well-being. Therasa et al. conducted a study on it employees and found that person-job fit improved employees' organizational commitment ^[27]; in the study, Lin Xinxin et al. used the multiple linear model to verify the relationship between person-job fit and employee innovation behavior. The results showed that person-job fit positively affected employee innovation self-efficacy and innovation behavior ^[28]. Su Yinan et al. and Yan Peilin also pointed out in their research that person-job fit negatively affects turnover intention, while person-job fit positively affects work engagement ^[29-30]. The research on antecedent variables mainly focuses on work stress, work family interface, performance pay, developmental human resource management practice, etc. In their research, Liu Bo et al. found that person-job fit has a moderating role between challenging stress and job remodeling ^[31]. Taking married professional women as the research objects, Yu Weina and others found that person-job fit has a positive moderating effect on work family promotion and positive behavior ^[32]. Similarly, Zhang Yong and long Lirong examined the impact of performance pay on creativity and the moderating effect of person-job fit through 296 pairs of superior subordinate matching data, and found that person-job fit regulates the relationship between performance pay and creativity ^[33]. Yuan Ling and others have confirmed that career development and training opportunities have a positive impact on person-job matching ^[34].

Does person-job fit has an important impact on employee engagement? Social exchange theory provides a good theoretical support for answering the above questions. According to social exchange theory, the quality of social communication leads to the return obligation of those who take their own interests as the direction of action. This relationship is often described as a kind of subtle reciprocal relationship between labor and capital. In this relationship, the person who gives action will seek the other party's reporting behavior until a potential communication balance perception that

both sides are satisfied exists^[35]. In this study, when person job matching can provide employees with a variety of needs, it will bring convenient conditions for their work. Employees can not only better meet the post requirements, but also the jobs can meet the needs of employees. At this time, it will stimulate the enthusiasm of employees to work hard. In order to realize their own value and obtain various resources, they will actively work hard. In this way, their engagement will be improved. From the existing research basis, different scholars have also discussed the relationship between the two from different aspects. Feng Liwei and others discussed the engagement of knowledge workers from the perspective of person-environment fit, and found that person-environment fit of knowledge workers had a significant positive impact on engagement^[36]; Zhang Ying et al. confirmed the relationship between person-organization fit and employee engagement through the survey of 467 employees^[37]. All of the above provide a theoretical basis for this paper.

3. Methodology

3.1 Subjects

This study is divided into two parts: pre investigation and formal investigation. Both the pre survey and the formal survey selected the nurses who were willing to participate in the survey and distributed the questionnaires. A total of 150 questionnaires were distributed in the pre survey, and 150 points were recovered. After eliminating some invalid and seriously biased questionnaires, a total of 139 questionnaires were valid, with an effective recovery rate of 92.7%. There were 676 formal questionnaires and 676 returned questionnaires. After excluding some invalid and seriously biased questionnaires, there were 639 valid questionnaires, and the effective recovery rate was 94.4%.

3.2 Methods

3.2.1 Person-job fit scale

In this study, the person- job fit scale developed by Singh and Greenhouse was used, including three items^[38]. The scale has been cited by Chinese scholars Zhang Yong and Long Lirong^[39]. The scale was scored by 5 points, 1 as "completely inconsistent" and 5 as "very consistent". The higher the score was, the higher the degree of person job matching was.

3.2.2 Model demonstration scale

The model demonstration scale developed by Chen Jianfeng was used, including three items^[40].

The scale was scored by 5 points, 1 as "completely inconsistent" and 5 as "very consistent". The higher the score was, the higher the impact of the adverse demonstration effect was.

3.2.3 Engagement scale

The simplified version of UWES developed by Schaufeli was adopted^[41-42]. There were 9 items in total, including 3 dimensions of vigor, dedication and concentration, and each dimension corresponding to 3 items.

3.3 Statistical method

In this study, spss22.0 was used to collate and analyze the data.

4. Findings

4.1 Pre survey

Although the scales used in this study are mature at home and abroad, whether these scales are applicable to the COVID-19 background and whether nurses can be taken as the research object need to be further verified. Therefore, this study is based on the initial scale, the COVID-19 was studied as a research background with nurses as the research background.

Firstly, the validity of the scale was analyzed. The measurement of each variable in this study is based on the domestic and foreign mature scale, through the strict scale development process, so it has good content validity. Factor analysis was used to verify the construct validity of the scale, the data analysis of the pre survey shows that the KMO value of the questionnaire is 0.922, which is greater than the judgment standard of 0.8. According to the research suggestion of Wen Zhonglin and MacKinnon, $P < 0.05$ indicates significant level^[43-44], so the Bartlett spherical test result is significant ($P < 0.001$). Therefore, the sample data of the pre survey is very suitable for factor analysis. In this paper, principal component analysis (PCA) and maximum variance (MVA) were used for factor analysis. Three principal factors were extracted, which were person-job fit (PJF), engagement (ENG), and exemplary role of heroes in harm's way (ERH). The index, factor load and convergence validity of each factor are shown in Table 1. The results showed that the factor load of each index was greater than 0.6; the aggregation validity and convergence validity of each factor were greater than 0.5; the overall eigenvalue of each factor was greater than 1; the cumulative explained variation of common factors was 81.639%, higher than the judgment standard of 60%; at the same time, the factor loads of each

index in other principal component latent variables

were less than 0.5, which indicated that they had good discriminative validity. To sum up, the total scale has a high level of construction validity.

Secondly, the reliability of the scale is analyzed, and the results are shown in Table 1. The item reliability of the three main factors was higher than 0.36, the combination reliability was higher than

0.7, the Cronbach's α of each subscale and the total scale were higher than the 0.7 criterion, so the total scale had a high level of reliability.

In conclusion, the reliability and validity of the total scale and each subscale meet the test indicators and criteria, so they can be used for formal research and subsequent model analysis and hypothesis testing.

Table 1. Reliability and validity analysis results of pre survey

Factor	Index	STD	AVE	SMC	CR	Cronbach's α	Cronbach's α
ENG	VIG1	0.676		0.457			
	VIG2	0.691		0.477			
	VIG3	0.847		0.717			
	DED1	0.881		0.776			
	DED2	0.814	0.638	0.663	0.940	0.961	
	DED3	0.708		0.501			
	CON1	0.892		0.796			
	CON2	0.836		0.699			0.963
	CON3	0.807		0.651			
PJF	PJF1	0.810		0.656			
	PJF2	0.880	0.713	0.774	0.881	0.909	
	PJF3	0.841		0.707			
ERH	ERH1	0.892		0.796			
	ERH2	0.836	0.715	0.699	0.883	0.941	
	ERH3	0.807		0.651			

4.2 Common method deviation test

Since all the questionnaire data were from nurses' reports, Harman single factor test was used for possible common method bias. The results show that the interpretation rate of the first common factor extracted is 19.663%, less than the critical value of 40%. Therefore, it is considered that there is no serious common method bias in this study.

4.3 Reliability and validity analysis

Firstly, the validity of the scale was analyzed. The measurement of each variable in this study is based on the domestic and foreign mature scale, through the strict scale development process, so it has good content validity. Factor analysis was used to verify the construct validity of the scale, the data analysis of the formal survey shows that the KMO value of the questionnaire is 0.943, which is greater than the judgment standard of 0.8, and the Bartlett spherical test result is significant ($P < 0.001$). Therefore, the sample data of the formal survey is very suitable for factor analysis. In this paper, principal component analysis (PCA) and maximum variance (MVA) were used for factor analysis. Three principal factors were extracted, which were person-job fit (PJF), engagement (ENG), and exemplary role of heroes in

harm's way (ERH). The index, factor load and convergence validity of each factor are shown in Table 2. The results showed that the factor load of each index was greater than 0.6; the aggregation validity and convergence validity of each factor were greater than 0.5; the overall eigenvalue of each factor was greater than 1; the cumulative explained variation of common factors was 80.337%, higher than the judgment standard of 60%; at the same time, the factor loads of each index in other principal component latent variables were less than 0.5, which indicated that they had good discriminative validity. To sum up, the total scale has a high level of construction validity.

Secondly, the reliability of the scale is analyzed, and the results are shown in Table 2. The item reliability of the three main factors was higher than 0.36, the combination reliability was higher than 0.7, the Cronbach's α of each subscale and the total scale were higher than the 0.7 criterion, so the total scale had a high level of reliability.

In conclusion, the reliability and validity of the total scale and each subscale meet the test indicators and criteria, so they can be used for model analysis and hypothesis testing.

Table 2. reliability and validity analysis results of formal survey

Factors	Index	STD	AVE	SMC	CR	Cronbach's α	Cronbach's α
ENG	VIG1	0.798		0.637		0.961	0.955
	VIG2	0.813		0.661			
	VIG3	0.873		0.762			
	DED1	0.821		0.674			
	DED2	0.816	0.630	0.666	0.938		
	DED3	0.665		0.442			
	CON1	0.827		0.684			
	CON2	0.791		0.520			
	CON3	0.721		0.626			
PJF	PJF1	0.875		0.766		0.902	
	PJF2	0.869	0.720	0.755	0.885		
	PJF3	0.799		0.638			
ERH	ERH1	0.892		0.796		0.913	
	ERH2	0.866	0.730	0.750	0.890		
	ERH3	0.803		0.645			

4.4 Descriptive statistics and correlation analysis

The results of correlation analysis showed that there was a positive correlation between person-job fit and exemplary role of heroes in harm's way ($r = 0.436$, $P < 0.001$), positive correlation between person-job fit and engagement ($r = 0.625$, $P < 0.001$), and positive correlation between exemplary role of heroes in harm's way and engagement ($r = 0.625$, $P < 0.001$). The above results are consistent with the research hypothesis, so the subsequent regression analysis can be carried out.

0.001), and positive correlation between exemplary role of heroes in harm's way and engagement ($r = 0.625$, $P < 0.001$). The above results are consistent with the research hypothesis, so the subsequent regression analysis can be carried out.

Table 3. Descriptive statistics and correlation analysis results

Variables	M	SD	PJF	ERH	ENG
1 PJF	4.537	0.806	(0.630)		
2 ERH	4.572	0.669	0.436***	(0.720)	
3 ENG	4.405	0.788	0.625***	0.625***	(0.730)

Note: the brackets represent the AVE value of the corresponding variable. *represents $P < 0.05$, ** represents $P < 0.01$, *** represents $P < 0.001$ (double tailed test), the same below.

4.5 Hypothesis test

Firstly, the direct effects of person-job fit on nurses' engagement and its dimensions were examined, as shown in tables 4 and 6. Person-job fit positively affected nurses' engagement ($\beta = 0.61$, $P < 0.001$), and person-job fit positively affected three dimensions: vigor ($\beta = 0.56$, $P < 0.001$), dedication ($\beta = 0.60$, $P < 0.001$) and concentration ($\beta = 0.57$, $P < 0.001$).

< 0.001), and person-job fit positively affected three dimensions: vigor ($\beta = 0.56$, $P < 0.001$), dedication ($\beta = 0.60$, $P < 0.001$) and concentration ($\beta = 0.57$, $P < 0.001$).

Table 4. Main effect and mediating effect test results

Variables	Outcome variable: ENG			Outcome variable: ERH			Outcome variable: ENG		
	β	t	95%CI	β	T	95%CI	β	t	95%CI
Gender	0.02	0.53	[-0.27,0.47]	0.02	0.53	[-0.23,0.41]	0.01	0.33	[-0.28,0.39]
Age	-0.03	-0.75	[-0.11,0.05]	0.02	0.44	[-0.05,0.08]	-0.03	-1.05	[-0.11,0.03]
Education	-0.02	-0.76	[-0.81,0.36]	-0.02	-0.58	[-0.65,0.35]	-0.02	-0.57	[-0.67,0.37]
Marriage	-0.06	-1.84	[-0.21,0.01]	-0.004	-0.13	[-0.10,0.09]	-0.06	-1.99*	[-0.20,-0.001]
HHW	0.21	7.03**	[0.12,0.22]	0.49	15.96***	[0.29,0.37]	0.001	-0.05	[-0.05,0.05]
PJF	0.61	20.06***	[0.53,0.65]	0.37	12.20***	[0.26,0.36]	0.44	14.72***	[0.38,0.49]
ERH							0.43	12.23***	[0.43,0.59]
R		0.67			0.65			0.74	
R ²		0.44			0.43			0.55	
F		83.905***			77.70***			110.186***	

Note: HHW stands for the degree of understanding and influence on the converse, the same below.

Secondly, the degree of familiarity and influence of heroes in harm's way will have an impact on the degree of nurses' person job matching, the degree of demonstration effect of reverse doers and the degree of engagement. The results are shown in Table 5. When nurses were more aware of the information and deeds of the heroes in harm's way, and the more influenced by the heroes in harm's way, the higher the score of person-job fit,

exemplary role of heroes in harm's way and engagement was, which indicated that the understanding and influence of the heroes in harm's way had a significant impact on each variable ($P < 0.001$). Therefore, this study will further test the mediating role of exemplary role of heroes in harm's way between person-job fit and engagement and its dimensions.

Table 5. Scores of variables in different degrees (total score \pm standard deviation)

Projects	PJF Scores	ERH Scores	ENG Scores
HHW			
Do not understand	15.00 \pm 0.00	13.00 \pm 2.83	31.50 \pm 19.09
Understand but have little effect	14.30 \pm 1.63	11.90 \pm 2.90	39.00 \pm 6.03
Understand but less impact	12.93 \pm 2.84	12.20 \pm 2.43	36.20 \pm 7.92
Understand, but the impact is moderate	12.47 \pm 2.70	10.96 \pm 1.97	33.49 \pm 6.97
Understand and influence	13.27 \pm 2.26	13.35 \pm 1.72	41.78 \pm 6.40
Understand and have a great impact	14.07 \pm 2.37	14.74 \pm 1.17	39.64 \pm 7.09
F	7.192	20.744	78.776
P	<0.001	<0.001	<0.001

Finally, the mediating role of the exemplary role of heroes in harm's way in the relationship between person-job fit and nurse engagement and its dimensions was examined, as shown in tables 4 and 6. Person-job fit had a positive effect on the exemplary role of heroes in harm's way ($\beta = 0.37$, $P < 0.001$), when the person-job fit, exemplary role of heroes in harm's way and engagement are put into the equation at the same time, the results showed that the positive effect of person-job fit on engagement was significantly weak ($\beta = 0.43$, $P < 0.001$), but the effect of exemplary role of heroes in harm's way on engagement is still significant ($\beta = 0.44$, $P < 0.001$), which indicated that the exemplary role of heroes in harm's way played a partial mediating role between person-job fit and

engagement. Similarly, the positive effect of person-job fit on the dimension of vigor was significantly weaker ($\beta = 0.42$, $P < 0.001$), but the exemplary role of heroes in harm's way was still significant ($\beta = 0.38$, $P < 0.001$); the positive effect of person-job fit on the dimension of dedication was significantly weaker ($\beta = 0.43$, $P < 0.001$), but the exemplary role of heroes in harm's way was still significant ($\beta = 0.43$, $P < 0.001$); the positive effect of person-job fit on the dimension of concentration was weak ($\beta = 0.41$, $P < 0.001$), but the exemplary role of heroes in harm's way was still significant ($\beta = 0.42$, $P < 0.001$). The above results show that the exemplary role of heroes in harm's way plays a partial mediating role between the three dimensions of person-job fit and engagement.

Table 6. Main effects and mediating test results of each dimension

Variables	Vigor			Dedication			Concentration		
	β	t	95%CI	β	t	95%CI	β	t	95%CI
Gender	0.03	0.82	[-0.24,0.59]	0.02	0.76	[-0.24,0.54]	-0.004	-0.12	[-0.44,0.39]
Age	-0.03	-0.83	[-0.12,0.05]	-0.04	-1.05	[-0.12,0.04]	-0.01	-0.20	[-0.09,0.08]
Education	-0.01	-0.41	[-0.679,0.52]	-0.03	-0.97	[-0.90,0.31]	-0.02	-0.74	[-0.89,0.41]
婚姻状况	-0.08	-2.22*	[-0.26, -0.02]	-0.05	-1.45	[-0.20,0.03]	-0.50	-1.37	[-0.21,0.04]
NXZ	0.20	6.37***	[0.12,0.23]	0.21	6.92***	[0.12,0.22]	0.19	6.03***	[0.11,0.21]
PJF	0.56	17.82***	[0.53,0.66]	0.60	19.54***	[0.54,0.66]	0.57	17.76***	[0.52,0.65]
R		0.62			0.66			0.62	
R ²		0.39			0.43			0.38	
F		67.178***			80.096***			64.649***	

Continued table 6.

Variables	Vigor			Dedication			Concentration		
	β	t	95%CI	β	t	95%CI	β	t	95%CI
Gender	0.02	0.67	[-0.26,0.42]	0.02	0.58	[-0.25,0.45]	-0.01	-0.37	[-0.45,0.31]
Age	-0.04	-1.07	[-0.12,0.04]	-0.04	-1.38	[-0.12,0.02]	-0.01	-0.41	[-0.09,0.06]
Education	-0.01	-0.21	[-0.68,0.54]	-0.02	-0.79	[-0.77,0.33]	-0.02	-0.55	[-0.76,0.43]
Marriage	-0.08	-2.33*	[-0.25,-0.02]	-0.05	-1.54	[-0.19,0.02]	-0.05	-1.44	[0.20,0.03]
NXZ	0.02	0.51	[-0.04,0.74]	0.000	-0.01	[-0.05,0.05]	-0.01	-0.40	[-0.07,0.05]
PJF	0.42	12.92***	[0.37,0.51]	0.43	14.22***	[0.38,0.50]	0.41	12.60***	[0.36,0.49]
RML	0.38	9.82***	[0.38,0.57]	0.43	12.10***	[0.44,0.61]	0.42	11.13***	[0.43,0.62]
R		0.69			0.73			0.69	
R ²		0.47			0.54			0.48	
F		80.057***			105.382***			83.886***	

5 Discussion

5.1 Effect of person-job fit on nurses' engagement

The first conclusion of this study is that person-job fit has a significant positive impact on nurses' engagement. Person-job fit refers to that the ability of an employee to complete a specified job matches the actual requirements of the job, or the individual's wishes and needs match the characteristics of the job post^[45]. During the COVID-19, whether the nursing professional quality and psychological quality of nurses can meet the care and treatment of confirmed, suspected or uninfected patients during the outbreak of the epidemic is worth discussing. Relevant studies also show that it is very important for nurses to match their positions reasonably, nurses, hospitals and patients^[46]. Therefore, it is of great theoretical value and practical significance to explore the person-job fit of nurses under the background of COVID-19. Work engagement can well reflect the above behavior results. Engagement refers to an employee's attitude towards work, including enthusiasm, motivation, engagement, and satisfaction. It includes vigor, dedication and concentration^[47-48]. Social exchange theory can better explain the relationship between person-job fit and engagement. Macey and Schneider pointed out that different characteristics and different degrees of matching of personal, work and organizational environment will have different impact on employees' psychological experience, and this psychological experience will have a corresponding impact on employee engagement^[49]. The individual has the conditions and ability to complete the work, and the work can provide all kinds of remuneration and resources needed by the employees, which will promote the exchange between the individual and the work. The employees exchange the remuneration and resources provided by the work by actively

completing the work. They are full of vitality at all times in the work and are willing to actively contribute to the completion of the work. They have a sense of expected gain and sense of work significance. It helps employees become more focused in their work and improve their work efficiency. In this way, they are committed to work with a high degree of engagement and show a dedicated work state^[50]. Relevant studies have shown that when the conditions and abilities of individuals, individual needs and aspirations, job requirements, and resources and rewards can be reasonably matched, employee engagement can be significantly enhanced, and when the exchange relationship is unbalanced or mismatched, employees' work enthusiasm, work enthusiasm and job satisfaction will decrease^[51-53], this negative work attitude and psychological experience will have an impact on engagement, leading to a decline in engagement^[54].

5.2 The mediating role of the exemplary role of heroes in harm's way

The second conclusion of this study is that the exemplary role of heroes in harm's way mediates the relationship between person-job fit and nurse engagement. Although the effect of person-job fit on individual outcome variables has been widely concerned by scholars, as a part of the organization, some scholars still point out that the mechanism and effect of this consistent matching on dependent variables should also be different^[55]. Is there any mechanism between the two that will affect this relationship? Social learning theory points out that social learning can be direct learning and indirect learning. Learning through observing examples is called indirect learning. If the behavior of the observed can have a positive impact, the observer will identify with the observed behavior, and learn and imitate^[56]. During the period of fighting against

the epidemic situation, the heroes in harm's way played an important role. Their cognition and

attitude towards the disease had a great effect on others, especially for nursing staff. During the COVID-19, the rebels showed their unique personality charm and played an indelible important role in fighting against the epidemic. The role of heroes in harm's way embodies and personifies the abstract moral and ethical concepts, values, distinctive personality characteristics, mastery of work, proficiency in technology and attitude towards work, through all kinds of glorious deeds, words and deeds during the period of fighting against the epidemic situation, the nurses were inspired to sympathize with their work and patients, and imitated their words and deeds, this kind of imperceptible example demonstration effect is more infectious and persuasive than traditional reasoning Education^[40]. As an example, nurses can see their own miniature in them by observing heroes in harm's way. By observing and learning the information provided by the heroes in harm's way, nurses can judge what behaviors they should take in their work, know how to carry out the work and how to obtain the resources needed, etc.^[57]. The role of heroes in harm's way shown by the reverse practitioners can lead nurses to learn from the spirit of example and earnestly practice the model behavior in practical work^[58]. What's more, the heroes in harm's way set a good example for the nurses during the epidemic period. Under the stimulation of the example, the nurses will stimulate their work enthusiasm, improve their sense of mission and sense of significance, and they will also be willing to make more efforts and contribute their professional ability to overcome the epidemic situation^[59]. Relevant research also shows that setting an example can help employees better integrate into the organization, and work hard to achieve better job performance, so as to achieve a dedicated work state^[60-61].

6. Implications

During the outbreak, novel coronavirus pneumonia patients were directly connected with the new crown pneumonia patients. Nurses were always accompanied by disaster relief. Nurses played an important role in fighting epidemic and rescue. Nurses' engagement is affected by many factors, among which person-job fit is one of the important factors. When there is a high-quality exchange between nurses and their jobs, i.e. high person job matching, nurses have more knowledge skills and job competency, and can adapt to and solve various problems encountered in the work

during the epidemic. At the same time, through the indirect learning of the heroes in harm's way, nurses

can produce empathy in their work, and constantly improve their work in the subtle influence. All of these have theoretical value and practical significance for nurses to improve their engagement in major public health emergencies such as COVID-19.

7. Limitations and Future research directions

First of all, this study only explored the influence of nurse's person-job fit and exemplary role of heroes in harm's way on engagement. The above variables are individual level variables, ignoring the influence of organizational environment and other contextual factors on the results. Therefore, in the future research, we can add appropriate organizational context factors, and use cross level method to explore the impact of organizational level variables and individual level variables on engagement.

Secondly, this study only examined the mediating role of the exemplary role of heroes in harm's way between person-job fit and engagement, but did not explore the moderating role in which the relationship between the two would be enhanced or weakened. Therefore, appropriate moderating variables can be added to the future research to further explain the influence mechanism between person-job fit and engagement by means of mediating or moderating adjustment.

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