

Research on the Relationship Between Team Psychological Capital, Team Collective Work Satisfaction and Work Input of Hotel Staff

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ABSTRACT

Based on the theory of “input-procedure-output” in performance management, this paper discussed the relationships between team psychological capital, team collective work satisfaction and work input through questionnaire survey and statistical analysis. The conclusions are as follows: (1) Team psychological capital is a high-order core construct, and it plays a more crucial part than the four dimensions; (2) There are differences in the influence of each sub-dimension on the intermediary and outcome variables, team resilience and the team hopes to show good explanatory ability; (3) Team collective work satisfaction plays a part in mediating the impact of team psychological capital on employee's work input. Based on the above analysis, the paper finally gives suggestions on how to development team psychological capital of the hotel staff, for the sake of providing theoretical and practical support for the sound development of the hotel industry and the improvement of competitiveness.

Keywords: *Team psychological capital, Work input, Team collective work satisfaction, Hotel staff*

1. INTRODUCTION

According to the released data by the Ministry of Culture and Tourism, in 2019, National Day received 782 million domestic tourists in seven days, a year-on-year increase of 7.81%. China's booming tourism demand offers a good opportunity for the tourism industry, especially for the hotel. How to optimize the quality of hotel service, satisfy the comprehensive needs of tourists and give tourists unforgettable experience is an urgent problem to be solved. Hotel staff is an important part of the process and directly affect customer experience. Previous studies on hotel staffs have focused on the negative aspects, such as work burnout and staff turnover, while psychological capital focuses on the positive aspects. At the same time, enterprises now pay more and more attention to teamwork. If team members have positive and lasting emotions, they can get knowledge and skills and emotional support from the team, so that they can devote themselves to work tasks.

Therefore, this study starts from the team which is the basic organizational structure of the hotel industry, takes the theories related to team psychological capital as the introduction point and the article hub, and discusses the relationship among three core variables, team psychological capital, team collective work satisfaction and work input.

2. LITERATURE REVIEW AND RESEARCH HYPOTHESIS

2.1. The Relationship between Team Psychological Capital and Work Input

Team psychological capital refers to a psychological state that is generated in the process of communication and cooperation between team members and plays a positive role in the completion of corporate goals, including four dimensions: team efficacy, team hope, team optimism and team resilience ^[1]. Work input is a positive emotion-cognitive state among staffs ^[2]. According to the work requirement-resource model, hotel staff will expend energy and emotion in the process of providing services, which need to be timely restored and supplemented ^[3]. Staffs full of team efficacy know the requirements of work tasks and have the confidence to complete team tasks ^[4]. Staffs in a team optimistic state are easy to find a positive attribution to complete work tasks and achieve team goals ^[5]. The higher the team hopes; the more energy staffs can devote to the team tasks ^[6]. Full of team resilience means staffs can quickly recover and willpower in the team to ensure the continuation of work tasks ^[7]. At the same time, as a high-level core construct, team psychological capital should play a stronger role than other's dimensions. Based on this, the following hypotheses are proposed:

H1: team psychological capital has a significant positive impact on the work input of hotel staff.
 H1a: team effectiveness has a significant positive impact on work input in hotel staff.
 H1b: the team hopes to have a significant positive effect on work input of hotel staff.
 H1c: team resilience has a significant positive impact on work input in hotel staff.
 H1d: team optimism has a significant positive effect on work input of hotel staff.

2.2. The Relationship between Team Collective Work Satisfaction and Work Input

Team collective work satisfaction refers to team members' convergent understanding of the team and its environment. Specifically, it includes three dimensions: internal environment satisfaction, external environment satisfaction and team work satisfaction [8]. Previous studies have confirmed that work satisfaction at the individual level can promote staffs' work input [9], and team work satisfaction emphasizes more on employees' evaluation of the team [10]. Based on this, the hypothesis is proposed:
 H2: team collective work satisfaction plays a significant positive impact on work input of hotel staff.

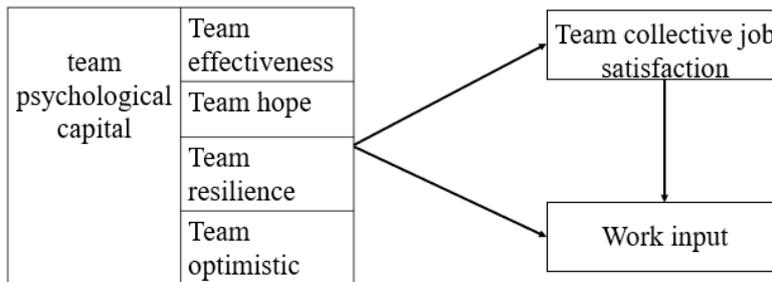
2.3. The Relationship between Team Psychological Capital and Team Collective Work Satisfaction

Team collective work satisfaction emphasizes the team members' recognition of the team task and team environment, which is a universally applicable emotional

attitude in the team. Previous studies have confirmed the significant positive correlation between individual psychological capital and individual work satisfaction [11]. Team's psychological capital is developed from individual psychological capital. Based on this, the following hypotheses are proposed:
 H3: team psychological capital plays a significant positive effect on team collective work satisfaction of hotel staff.
 H3a: team effectiveness has a significant positive impact on team collective job satisfaction of hotel staff.
 H3b: the team hopes play a significant positive impact on team collective work satisfaction of hotel staff.
 H3c: team resilience has a significant positive impact on team collective job satisfaction of hotel staff.
 H3d: team optimism plays a significant positive impact on team collective work satisfaction of hotel staff.

2.4. Team Collective Work Satisfaction Plays a Part of Mediating Role in the Influence of Team Psychological Capital on the Work Input in Hotel Staff

Psychology think people's behavior will be under the drive of emotional attitude, team psychological capital is formed by interaction in team working positive psychological quality. Team psychological capital can promote staffs' evaluation of work, thus promoting staffs' dedication to work. Based on this, the following hypothesis is proposed:
 H4: team collective work satisfaction partly mediates the influence of team psychological capital on the work input of hotel staffs.
 In summary, the hypothesis model is shown in the following figure:



staff.

3. RESEARCH DESIGN

3.1. The Data Collection

In the paper, data were obtained by means of questionnaires, which were distributed from January 2019 to March 2019, and 500 formal questionnaires were distributed to hotel

3.2. Questionnaire Design and Variable Measurement

The questionnaire consists of four parts: team psychological capital, team collective work satisfaction, work input and demographic characteristics. The items of the variables were obtained through a combination of maturity scales, expert advice, and the appropriateness of translation. Based

on the Luthans' [1] study, the team psychological capital was modified appropriately, and 16 questions including "our team has the ability to face long-term complex problems and solve them" were adopted. According to the research of Mason and Griffin [8], team collective work satisfaction is based on 10 questions including "our team members are very happy to work in the same team". According to the research of Shaufeli et al. [2], combined with the applicability of this study, 7 questions including "I feel I am full of energy" were applied to the work input.

In this study, 500 questionnaires were issued. After eliminating the obviously unqualified questionnaires, there was 391 valid questionnaires, and the recovery rate was 78.2%. In this study, SPSS22.0 and AMOS17.0 were selected for data analysis.

4. EMPIRICAL RESULTS

4.1. The Reliability Test

Cronbach's values of each variable scale were significantly higher than 0.70 and all CICT values met the requirements of reliability test (table 1). It indicates that each scale's reliability is high.

Table 1 Reliability test of variables

Dimensions and Items		CITC	α	Dimensions and Items		CITC	α
Team effectiveness	X11	0.656	0.845	Internal environment	M11	0.775	0.871
	X12	0.705			M12	0.743	
	X13	0.701			M13	0.706	
	X14	0.660			M14	0.683	
Team hope	X21	0.792	0.909	External environment	M21	0.769	0.879
	X22	0.778			M22	0.751	
	X23	0.810			M23	0.779	
	X24	0.795		The work itself	M31	0.796	0.892
Team resilience	X31	0.814	M32		0.820		
	X32	0.854	M33	0.748			
	X33	0.861	Work input	Y11	0.748	0.912	
X34	0.826	Y13		0.759			
Team optimistic	X41	0.854		Y14	0.752		
	X42	0.848		Y15	0.736		
	X43	0.797		Y17	0.691		
	X44	0.764		Y18	0.706		
			Y19	0.745			

Source: SPSS statistical results

4.2. The Validity Test

The KMO values of team psychological capital, team collective work satisfaction and work input are all greater

than 0.8. Then, factor analysis is carried out for each variable to obtain the rotation component matrix. It was found that the load of each factor was greater than 0.5, indicating a good validity of the questionnaire (table 2).

Table 2 Validity test of variables

Variables	Items	Component				Variables	Items	Component		
		1	2	3	4			1	2	3
Team psychological capital	X11	0.050	0.128	0.054	0.796	Team collective work satisfaction	M11	0.854	0.135	0.178
	X12	0.109	0.070	0.068	0.836		M12	0.847	0.120	0.141
	X13	-0.005	0.168	0.043	0.832		M13	0.782	0.223	0.184
	X14	0.163	0.070	0.171	0.776		M14	0.790	0.108	0.200
	X21	0.062	0.099	0.883	0.041		M21	0.226	0.127	0.866
	X22	0.151	0.138	0.845	0.103		M22	0.174	0.219	0.843
	X23	0.141	0.148	0.856	0.176		M23	0.210	0.211	0.853
	X24	0.142	0.138	0.866	0.047		M31	0.131	0.876	0.210
X31	0.878	0.131	0.077	0.117	M32	0.206	0.877	0.197		

	X32	0.890	0.192	0.131	0.040	Work input	M33	0.153	0.865	0.137
	X33	0.889	0.132	0.191	0.115		Y11	0.782	0.249	
	X34	0.884	0.128	0.114	0.071		Y13	0.795	0.248	
	X41	0.197	0.881	0.106	0.172		Y14	0.782	0.265	
	X42	0.149	0.890	0.122	0.129		Y15	0.764	0.267	
	X43	0.127	0.876	0.097	0.056		Y17	0.756	0.189	
	X44	0.120	0.814	0.227	0.146		Y18	0.745	0.257	
							Y19	0.771	0.269	

Source: SPSS statistical results

4.3. Correlation and Discriminant Validity Tests

This study used Pearson correlation as inspection standard of relevance. The consequences indicate that significant

correlations exist among the dimensions, with higher correlation between the sub-dimensions of team psychological capital and the same between team collective work satisfaction, and the discriminant validity has been tested (Table 3).

Table 3 Correlation and discriminant validity test

	Team Effectiveness	Team Hope	Team Resilience	Team Optimistic	Internal Environment	External Environment	The Work Itself	Work Input
Team effectiveness	.778							
Team hope	.346**	.854						
Team resilience	.242**	.339**	.862					
Team optimistic	.335**	.397**	.360**	.869				
Internal environment	.173**	.190**	.224**	.178**	.794			
External environment	.142**	.173**	.169**	.181**	.360**	.838		
The work itself	.289**	.309**	.259**	.296**	.312**	.254**	.853	
Work input	.403**	.496**	.471**	.439**	.370**	.242**	.419**	.785

** . There was a significant correlation at the level of.01 (bilateral).

Source: SPSS statistical results

4.4. Hypothesis Test and Result Discussion

Existing studies have shown that a single dimension of

Table 4 SEM model estimation table of sub-dimensions of hotel staff team psychological capital

			Standardized Coefficients	Unstandardized Coefficients	S.E.	C.R.	P	Hypothesis
Satisfaction	<---	Effectiveness	0.212	0.13	0.048	2.713	0.007	yes
Satisfaction	<---	Hope	0.199	0.102	0.041	2.512	0.012	yes
Satisfaction	<---	Resilience	0.233	0.126	0.042	3.027	0.002	yes
Satisfaction	<---	Optimistic	0.169	0.085	0.039	2.16	0.031	yes
Work input	<---	Effectiveness	0.096	0.108	0.062	1.741	0.082	no
Work input	<---	Hope	0.188	0.178	0.052	3.4	***	yes
Work input	<---	Resilience	0.184	0.184	0.053	3.435	***	yes
Work input	<---	Optimistic	0.08	0.073	0.05	1.477	0.14	no
Work input	<---	Satisfaction	0.482	0.887	0.171	5.199	***	yes

Source: AMOS statistical results

From the paper, team efficacy has a significant positive impact on team work satisfaction, and hypothesis H3a is established. The team hope plays a significant positive impact for team collective work satisfaction. H3b is established. Team resilience has a significant positive impact on team work satisfaction, and hypothesis H3c is established. The team optimism of the last sub-dimension plays a significant positive impact for collective work satisfaction. H3d is true. Team resilience has the strongest explanation for team collective work satisfaction, while team optimism is the least. Team efficacy has no significant positive effect on work involvement of hotel staff, and hypothesis H1a is not valid. The team hope has a significant

positive impact on the job input of hotel staff, and hypothesis H1b is established; Team resilience plays a significant positive impact on job input of hotel staff, and H1c is established. Team optimism has a significant positive effect on staffs' work input, and hypothesis H1d holds. Among them, team effectiveness has no effect on work input, and the standardization coefficient of team optimism is too small, so the interpretation ability is limited. Team collective work satisfaction has a significant positive impact on work input of hotel staff, and hypothesis H2 is established. Further, it is necessary to test the significant impact of team psychological capital and team collective work satisfaction.

Table 5 Results of fitting degree test of SEM test model for psychological capital of hotel staff

			Standardized Coefficients	Unstandardized Coefficients	S.E.	C.R.	P	Hypothesis
Satisfaction	<---	Team psychological capital	0.680	0.549	0.081	6.783	***	yes
Work input	<---	Team psychological capital	0.646	0.926	0.143	6.472	***	yes
Work input	<---	satisfaction	0.22	0.391	0.166	2.353	0.019	yes

Source: AMOS statistical results

As can be seen from the above table, team psychological capital plays a significant positive impact on team collective work satisfaction, and hypothesis H3 is valid. Team psychological capital has a significant positive impact on the job input of hotel staff, so hypothesis H1 is established. It indicates that the team is able to interaction between various dimensions of psychological capital, to offset the bad mood and strengthen the positive role, so as to enhance team collective work satisfaction, work input. Team collective work satisfaction has a significant positive impact on staffs' work involvement, assuming H2 is true. Team psychological capital as a whole concept and team work satisfaction have a certain overlap effect on the effect

of outcome variables, but also can't reach full irreplaceable role, so further inspection intermediary effect exists is needed.

4.5. Intermediate Effect Test

Then, it was verified that whether team psychological capital affected staffs' work input and team performance through team collective work satisfaction. The method of Bootstrapping in AMOS was adopted. The specific results were shown in the following table (table 6):

Table 6 Intermediate effect test

	Standardized Effect Value	Bias-Corrected		Percentile	
		95% CI		95% CI	
		Lower	Upper	Lower	Upper
Total effect					
Team psychological capital -work input	0.796	0.733	0.848	0.732	0.804
Indirect effect					
Team psychological capital - team collective work satisfaction- work input	0.150	0.021	0.302	0.020	0.301
Direct effect					
Team psychological capital -work input	0.646	0.487	0.869	0.469	0.804

Source: AMOS statistical results

The table above shows that the total effect, direct effect and

indirect effect of team psychological capital on employees'

work input exist, and hypothesis H4 is valid. The results show that team collective work satisfaction plays a part of the intermediary role in the effect on team psychological capital on staffs' work input. Team psychological capital and team collective work satisfaction have a certain overlap effect on these two outcome variables. The test of mediating effect further illustrates the influence of team psychological capital and team collective work satisfaction on employees' work involvement.

5. INNOVATION AND OUTLOOK

5.1. Innovation

The innovation of this study is mainly manifested in (1) sorting out the existing results of the study on team psychological capital and team collective job satisfaction, and verifying the relation of the two variables. (2) Expand the research on psychological capital on the level, and verify the relationship between a whole and the sub-dimensions of team psychological capital. (3) verified the relationship of team psychological capital, team collective work satisfaction and work input.

5.2. Outlook

The data collection method of this study is questionnaire survey. Qualitative research should be included in the future research to enrich the subjective category concepts such as team psychological capital. In the design of the questionnaire, the combination of employee scoring and supervisor performance evaluation indicators should be adopted to achieve a more objective result. The questionnaire collected in this study is cross-sectional data. In future studies, a comparative analysis can be conducted between a team established with a short time and a mature team, so as to verify not only the promotion of team psychological capital, but also the cycle time of intervention, so as to better serve team building.

6. CONCLUSION

The results tell us that psychological capital cultivation within the hotel department needs to be strengthened, and collective activities other than daily work communication and cooperation play an important role in deepening the connection between team members, communicating feelings and enhancing trust. And hotel service should be standardized, training of hotel staff should be strengthened, problem-solving ability of each team should be improved, confidence of internal team staff should be enhanced, unified goal orientation and emotional state of team staff should be cultivated. Only after retaining employees can the hotel consider building a stable and orderly team, deepen employees' recognition of the team

and the enterprise, improve passion for work engagement, and improve team performance.

REFERENCES

- [1] Walumbwa F O, Luthans, F, and Avey J B. Authentically leading groups: The mediating role of collective psychological capital and trust[J]. *Journal of Organizational Behavior*, 2011, 32(01):4-24.
- [2] Schaufeli W B, Bakker A B, and Salanova M. The measurement of work engagement with a short questionnaire a cross-national study[J]. *Educational and Psychological Measurement*, 2006, 66(04): 701-716.
- [3] Shang Xiao. Study on the influence of psychological capital on entrepreneurial team behavior[D]. Donghua University, 2012.
- [4] Tian Xizhou, Pu Yongjian. Positive psychological capital and its application in tourism human resource management [J]. *Tourism Science*.2008, (01):57-60.
- [5] Sweetman D, Luthans F, and Avey J B, et al. Relationship between positive psychological capital and creative performance[J]. *Canadian Journal of Administrative Sciences-Revue Canadienne Des Sciences De L Administration*, 2011, 28(01):4-13.
- [6] Zhou Wenxia, Xie Baoguo, and Xin Xun. A meta-analysis of the influence of human capital, social capital and psychological capital on career success of Chinese employees[J]. *Acta Psychologica Sinica*,2015, (02):215-263.
- [7] Lu Hong, Ge Yuhui. Strengthen psychological capital management, reduce employee work burnout[J]. *Jiangsu Commercial Forum*, 2008, (03):121-122.
- [8] Mason, Claire M, Mark A Griffin. Group task satisfaction: applying the construct of work satisfaction to groups[J]. *Small Group Research*, 2002, 33(03):271-312.
- [9] Ma Ming, Chen Fangying, et al. Empirical research on the relationship between staff satisfaction and engagement -- taking hotels as an example[J]. *Management World*, 2005, (11): 120-126.
- [10] Tang Jianxiong, Tu Xin, Bo H.Ferns. The influence of social responsibility orientation of leadership on work satisfaction of hotel employees[J]. *Tourism Tribune*.2013, (3):62-72.

[11] Wang Yanfei, and Zhu Yu. Psychological capital theory and its relevant research progress[J]. Foreign Economies and Management, 2007, (29):32-39.