

How does transformational leadership effect on team performance: Team atmosphere as mediator?

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Abstract

In this paper, we started from the team atmosphere, and discuss the impact of transformational leadership on team performance. Then explore the mediating role of team atmosphere. A questionnaire survey was conducted on 34 high-tech R&D teams of IT enterprises, and finally 272 valid questionnaires were obtained. The empirical results showed that transformational leadership has a significant positive impact on team atmosphere and performance. The team atmosphere mediates the relationship between transformational leadership and team performance.

Keywords

Transformational leadership, Team atmosphere, Team performance.

1. Introduction

In the new economic environment, there are more and more new forms of organizations such as virtualization organizations, borderless teams and project-based teams. In the past, the work model that used to be individual and solitary struggle more and more with the times. Footsteps, while the team-based work model gradually highlights its advantages, there is a trend to replace the former. How transformative leadership acts as a communication and coordination of information between superiors and subordinates throughout the team? And how it creates an atmosphere of teamwork among members of the team. That is in the mutual trust, interdependence and mutual support of the entire team, motivate team members to focus on work to improve their work efficiency. And how to influence team members to enhance their common psychological perception? What kind of influence does not the same team atmosphere have on the team performance? What kind of relationship does the two have? On the basis of the previous literature, this study put forward the relevant theoretical model, using team atmosphere as the mediating variable, and explore the impact on team performance.

2. Prior Research and Hypotheses

2.1 Transformational leadership, team atmosphere, team performance

Bass and Avolio (1989) argue that good leaders are not only good at using power but are also good at using environmental factors to give them exceptional care and encouragement to meet subordinate psychological needs, so that their leaders are willing to put the leader's goal and beliefs as their own, improve their work efficiency and enthusiasm, and finally improve the performance of the entire team. Zaccaro (2001) suggests that transformational leadership can influence some processes such as members' common perceptions and work behaviors. Transformational leadership through the establishment of a higher level of goals to encourage their subordinates, to stimulate their enthusiasm for the work, and then create a positive and optimistic team atmosphere. And it also can make the members of the team have between heart and heart communication, build mutual trust and share the ideal vision, increase employee satisfaction with the team. Thereby enhance the creativity of employees.

Therefore, we support hypotheses as follows:

H1: Transformational leadership has a significant positive impact on team performance.

Based on empirical research, McClelland (1982) proposed that team leadership behavior has a significant positive effect on the innovation atmosphere in the team; Anderson et al. (1990) suggested that leadership behavior has a positive effect on the innovation atmosphere in the team; Sarin and McDermott (2003) empirically suggested that if the team leader adopts a more democratic style, then the team in the formation of a better atmosphere more easily. While domestic scholars such as Zhu Shaoying and Qi Ershi (2008), who are engaged in the research and development of high-tech teams, found that the transformational leadership of the team had a significant positive impact on the team atmosphere. After the above correlation analysis, put forward the corresponding assumptions, as follows:

H2: Transformational leadership has a significant positive impact on team atmosphere.

2.2 The mediating role of team atmosphere

As foreign scholars Guzzo and Shea (1993) mentioned above, based on Hackman's research, explore the classic "input-process-output" theoretical model, transformational leadership is input, team atmosphere is process, and team performance is the output. The team input through the team process and then affect the output of the team, which means that transformational leadership behavior through a certain mechanism on the team atmosphere have an effect, and then affect the overall team performance. In fact, many scholars think that the team atmosphere is influenced by transformational leadership and act as a bridge as an intermediary in the study of the relationship between transformational leadership and team performance. Gladstein (1954) analyzed the effectiveness of leadership to improve the team innovation performance played a certain role in promoting, and team atmosphere on leadership effectiveness is more significant. Based on the above research, this paper proposes the following hypotheses:

H3: The team atmosphere mediates the relationship between transformational leadership and team performance.

Based on the previous relevant research hypothesis, this paper designs a theoretical model as shown in Fig. 1.

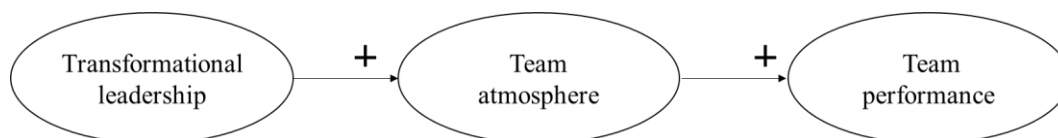


Fig.1 Theoretical model

3. Method

3.1 Research design

This article selects 34 IT enterprises in Xi'an high-tech companies team employees as the research object. In order to ensure the authenticity of the questionnaire, the questionnaire which used in this paper is an anonymous survey. It is divided into two forms: on-site hard copy and online electronic copy. The online electronic copy is directly filled out through the internet. The questionnaire related background information about the respondents, including gender, age, academic qualifications, positions in the team, team size, team establishment time and the nature of the enterprise.

3.2 Measures

3.2.1 Transformational leadership

Transformational leadership was assessed using sixteen items which derived from Bass & Avolio (1990). It has 15 items. The items were responded by using 5-point Likert scale ranging from "I completely disagree" (1) to "I completely agree" (5). Data were aggregated at the team level. Cronbach's α of aggregated scores was 0.914.

3.2.2 Team atmosphere

Team atmosphere was measured by 16 items adapted from Gee-Woo Bock (2005) which including three related dimensions: friendship, innovation, fairness. The items were responded by using 5-point Likert scale ranging from “I completely disagree” (1) to “I completely agree” (5). Data were aggregated at the team level. Cronbach’s α of aggregated scores was 0.850.

3.2.3 Team performance

Team performance was calculated by Kuo-Chung Chang (2011).It has 5 items. The items were responded by using 5-point Likert scale ranging from “I completely disagree” (1) to “I completely agree” (5). Data were aggregated at the team level. Cronbach’s α of aggregated scores was 0.857.

4. Analysis and Results

4.1 Descriptive statistics and correlations

Table1 shows the specific analysis results related to the three dimensions of transformational leadership behavior, team atmosphere and team performance such as mean value, standard deviation and descriptive statistics of correlation coefficient.

Table 1 Means, standard deviations and correlations.

	M	SD	1	2	3	4	5	6	7
1. charismatic leadership	3.65	0.64	1						
2. vision inspiration	3.62	0.62	.736**	1					
3. personalized care	3.61	0.63	.742**	.770**	1				
4. friendship	3.63	0.63	.924**	.858**	.772**	1			
5. innovation	3.73	0.58	.726**	.678**	.719**	.717**	1		
6. fairness	3.59	0.62	.727**	.864**	.933**	.776**	.678**	1	
7. team performance	3.70	0.61	.740**	.691**	.710**	.743**	.881**	.673**	1

As can be seen from the table 4.1, the three dimensions of transformational leadership behavior, charismatic leadership, vision inspiration, and personalized care all have significant positive correlations with team performance ($p < 0.01$). Explain that in a team where leaders adopt transformational leadership behavior, the team usually has good performance. Therefore, our findings supported hypothesis 1.

The three dimensions of transformational leadership behavior are the three dimensions of charismatic leadership, visionary motivation, individualized care and team atmosphere, that is, the positive relationship between friendliness, innovativeness and fairness. ($p < 0.01$) This means that if a leader in a team adopts transformational leadership, the team usually has a good atmosphere. The hypotheses 2 was supported.

Moreover, we can draw a conclusion that the three dimensions of team atmosphere have a significant positive correlation on friendship, innovation, fairness and team performance. This means that teams tend to have good performance when the team atmosphere is good.

4.2 Hypothesis Tests: The mediating role of the team atmosphere

As the variable team atmosphere contains three dimensions, this article will adopt the AHP to add the friendly atmosphere, innovation characteristics and fairness characteristics between the transformational leadership behavior and the team performance respectively. Through the change of coefficient of regression equation to examine the mediating role of the team atmosphere.

From Table 2, before joining the team atmosphere, team performance = 0.405 charismatic leadership + 0.19 visionary motivation + 0.264 personal care. After the factors of friendly relations, innovative features and fair features were added between the independent leadership reforming variables and the performance of the dependent variable teams, the original significant relations changed.

After joining the friendly relations, the coefficient of regression of leadership charm decreased from 0.405 to 0.388, but had no effect on the coefficients of the vision stimulation and individualized care. It showed that the friendly relations had some mediating effect on the relationship between

charismatic leadership and team performance, while the relationship between vision incentive and personalized care respectively did not play any role in the study of the relationship between team performance.

Table 2 The hierarchical regression of team atmosphere between transformational leadership behavior and team performance

variable	Transformational leadership behavior regains team performance		Add friendly relationship		Add Innovative features		Add Fair features	
	Beta	t	Beta	t	Beta	t	Beta	t
Independent variables								
Charm leadership	0.405	6.637	0.388	3.632	0.151	3.224	0.379	6.247
Vision incentive	0.19	2.972	0.18	2.155	0.084	1.794	0.35	4.296
Personalized care	0.264	4.072	0.264	4.065	0.042	0.854	0.548	4.898
Intermediate variable								
Friendly relations			0.026	0.192				
Innovative features					0.685	15.816		
Fair features							-0.416	-3.092
F	144.763		108.191		272.039		114.432	
R2	0.618		0.618		0.803		0.632	
Adj R2	0.614		0.613		0.800		0.626	

After joining innovation performance, the regression coefficient of charismatic leadership decreased from 0.405 to 0.151, the regression coefficient of vision incentive decreased from 0.19 to 0.084, The regression coefficient of personalized care decreased from 0.264 to 0.042, which indicates that the innovative features have partial mediating effects on the study of the relationship between charismatic leadership, vision motivation and personalized care and team performance.

After joining the atmosphere of fairness, charismatic leadership, vision stimulation and personalization The regression coefficient of caring not only did not decline but increased, indicating that the atmosphere of fairness did not play an intermediary role between team leadership and team performance.

5. Discussion and Implications

5.1 Conclusion

This article based on the relevant empirical research, and the results between the research variables are below.

First, team leadership has a direct positive effect on team performance. Transactional leadership in team leadership plays a positive role in team performance through charismatic leadership, visionary motivation and personalized care. Transformational leadership has always been a key part of the team and organization, and transformational leadership effectiveness. But also the performance of the important factors, and charismatic leadership, vision and personal care and personalized care all can promote the effectiveness of leadership, of course, will also promote the performance of the team.

Second, a good team atmosphere has a direct positive effect on team performance. The three dimensions of team atmosphere are friendly, creative and fair. All three of these dimensions have a direct positive effect on team performance.

Third, the team atmosphere plays an intermediary role in the relationship between transformational leadership and team performance. Team atmosphere is the bridge between transformational leadership and team performance. Team atmosphere plays an intermediary role in team leadership and team performance through the friendly relations among team members and the innovation in the team.

5.2 Implications for Managers

With the increasingly fierce global competition and the advent of the internet, this paper has great management significance on the research of the team and the intense competition today. The previous empirical analysis mostly stays in the influence of team leadership on team performance. However, the influence of team atmosphere on transformational leadership and team performance is seldom involved. Therefore, the empirical study shows that team atmosphere plays a mediating role between transformational leadership and team performance. This conclusion is of great significance to managers.

Nowadays, as a great inspiration, the transformational leadership creates a good team atmosphere for the team by improving its professional skills. The good team atmosphere will greatly enhance the cohesion and efficiency of the team members, and the team performance will naturally increase accordingly.

At the team level, it is suggested that team leader behavior directly enhance team performance by enhancing charismatic leadership, strengthening the vision of incentives and increasing personal care.

At the individual level, as a member of the team, the team's friendly atmosphere, fair atmosphere and atmosphere of innovation can greatly enhance staff work enthusiasm, and thus improve the overall performance of the team, it is recommended that team leaders in the early days of the team to consider these factors, then the management of the later will certainly be much easier.

5.3 Limitations and Future Research

Use of a convenience sample of Xi'an could be a limitation in terms of practical implications, future research could examine our model with teams and team leaders working on other business issues to ascertain if the relationships we found is robust. This study mainly uses the questionnaire to collect the data and the questionnaire is mainly based on the foreign researchers. Due to the different national conditions and cultural environment, the applicability of this study will be somewhat biased, and the relevant theoretical research in the future should be more localized.

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