

The Relationship of Belief and Team Performance: Mediated by Team Learning

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Abstract

In the highly competitive modern society, team has become the basic management unit among various companies in the world, and it has become the most popular research topic that how to build an effective team performance, so domestic and foreign scholars have conducted a lot of research from different angles. In recent years, some scholars begin to focus on the important role of team belief in the team. Combining with Chinese situation, this study constructs a theoretical model of belief, team learning and team performance, and proposes some research hypotheses. Through a questionnaire to collect data to empirical test the underlying hypotheses. The results show that belief has a positive effect on team learning, and team learning plays an intermediary role between belief and team performance but not completely mediation.

Keywords

Belief; Team learning; Team performance.

1. Introduction

In the 21st century, the world economy has been changed from extensive economic growth to pursue economic cooperation. This change in the economic model is accompanied by the rapid development of information technology and knowledge economy. The prosperity of technical areas makes knowledge-based jobs increasing, rather than diminishing the unskilled jobs. For mental that needed in knowledge-based jobs, individual working alone mode cannot meet the demands of high performance of firms, but team work can integrate human resources, joint the team members and create a high performance. As a matter of course, team work which is advantageous becomes the best choice of company operation. In an age which team work increasingly common, companies are most concerned about how to improve team performance. The academic study of team and team performance is endless, many scholars research from different angles and perspectives, put their points of view about improving team performance.

Van den Bossche et al. proposed TLB&B model in 2006, and studied the relationship between team belief, team learning behaviors and team performance, which put forward innovative belief interpersonal context and the relationship between team learning behaviors and team performance under this context [1]. After this, other scholars studied further on TLB&B model, but in China there was little research about this. So this study references the research of other scholars and combines with Chinese situation, analyzes the relationship between belief, team learning and team performance, builds and tests relevant hypothetical model.

2. Literature References

2.1 Team belief

IBM's management guru Thomas • Watson has said that the long-term existence of enterprise does not attribute its organization form or management skills, but its belief and tremendous cohesion of employees [2]. As an effective management tool, scholars pay more attention to belief. Each individual and business are all in a value dualistic society, so individuals and businesses will seek spiritual needs when the material needs have been met, and belief is the source of the spiritual needs of individuals and businesses. Belief is also equally crucial for a successful team. In 2006, Van den

Bossche et al. first proposed the TLB&B model to study the relationship of belief, team learning behaviors and team performance, they thought that belief interpersonal context was formed by interpersonal relationships of the group members, as a result of the interaction between group members [1]. They also proposed that belief should be involved into interdependence, social cohesion, task cohesion, group potency and psychological safety. Ortega et al. considered that belief interpersonal context referred to belief of members for the common characteristics of them, which regulated the interaction of team members, particular behaviors related to learning, and they thought belief should focus on psychological safety, interdependence and group potency [3].

Referencing to the definition of Van den Bossche and combining with the Chinese context, this paper considers that team belief is a common belief of team members on the relevant relationship between them, as their code of conduct or activity guide, and proposes that belief can be divided into interdependence, social cohesion, task cohesion, group potency and psychological safety.

2.2 Interdependence

Interdependence refers to background characteristics of body and behaviors outside, which defines the relationship between team members that each member can influence others and can also be affected [4]. Interdependence describes a degree of dependence on other members when one accomplishes tasks and meets needs. Kiggundu and Marcus believed that interdependence was an important feature that team differed from individuals collection and groups [5-6]. Barrick et al. thought that “real team” was a group with a high degree of dependence [7]. Thus, interdependence is an important feature of the team. Chinese scholar Zhou Na et al. thought interdependence could improve individual innovation behavior [8]. Wagemen thought that team interdependence came mainly from four aspects: (1) teamwork inputs, namely technology, distribution of resources, the role of differences; (2) the process team completing task; (3) goal of the team members and the way to achieve; (4) remuneration and performance evaluation of team members [9].

Depending on different interdependence sources, scholars divided interdependence into two categories: task interdependence and goal interdependence. Task interdependence means the extent that team members think their work must rely on other members, and this interdependence will inspire an awareness that they need to cooperate closely to execute community tasks and accomplish common goals [3]. Goal interdependence refers to the extent that team members think their goals can be achieved only when other members achieve their goals. Crawford et al. thought that compared to individual task, task interdependence could lead to more communication, assistance and information sharing [10]. Kiggundu believed that task interdependence related to work experience responsibility of other people, which in turn led to team’s shared responsibility [11]. Wageman believed that whenever collaboration was important for high task performance, and high task interdependence stand by reward was crucial [9]. Vegt et al. considered that task interdependence had a positive effect on team process, including cooperation, mutual assistance and role flexibility [12]. This study argues that interdependence is the degree of dependence between team members to accomplish tasks and meet needs.

2.3 Cohesion

Festinger who studied cohesion early, defined cohesion as “the results that using every power to make members stay in the organization” [13]. With the in-depth study of cohesion, it was believed that cohesion was a multi-dimensional structure, so scholars drew a distinction of different types of cohesion, which was generally recognized to task cohesion and social cohesion. Mullen et al. thought that task cohesion referred to the shared commitment among members to achieve goals which needed collective effect, and social cohesion referred to the nature and quality of the relationship between members, such as love, care, and the degree of closeness between members [14]. Van Vianen et al. supported that task cohesion emphasized team members focus on group because they shared a common task, while social cohesion emphasized team members focus on group because of their rapport with others [15]. Janis reported that social cohesion would lead to group thinking, and task cohesion would prevent group thinking [16]. Wang Shuanglong et al. found that team cohesion had a

positive moderate effect on subjective norms and individual innovation behaviors [17]. Shi Guanfeng et al. found that inward and outward border management were positively correlated with task cohesion and social cohesion, at the same time, task cohesion and social cohesion had a positive effect on team performance [18]. Li Wei et al. thought that task cohesion would contribute to making correct investment decisions and improving the quality of group decision-making [19]. This study argues that cohesion is the degree of staying on the team to collaboration for achieving team goals, including task cohesion and social cohesion, which task cohesion refers to team members focus on team because of common tasks, and social cohesion refers to team members focus on team because of the emotional relationship with others.

2.4 Group potency

Bandura had defined group potency as “the common belief that team members think their team will achieve a specific level of performance if they combine with each other in a certain situation”, and he thought that group potency would affect effort level, insist level and target selection [20]. In simple terms, group potency refers to common belief of group members on group effectiveness [21]. Group potency is a concept of a group, and a universal and integral belief on group effectiveness, therefore, group potency does not refer to the ability of the team, but perception and evaluation of team members on team capacity. This paper argues that group potency refers to the common belief that their team has the capacity and effectiveness.

2.5 Psychological safety

The earliest study of psychological safety was the discussion of Schein, he thought that psychological safety was a general feeling among members within the group to support each other, and this feeling could make members willing to take innovation and take courage to complete the task [22]. Edmondson proposed team psychological safety in the context of team learning, and she considered psychological safety should be studied in the level of overall team [23]. She defined psychological safety as a common belief of team members that it was safe to undertake interpersonal risk, and they believed the team would not embarrass, reject or punish someone who expressed his own opinions, and this confidence came from respect and trust between team members. Since then, many western scholars studied and analyzed whole team psychological safety from different perspectives. West proposed a concept of “safe participation”, which was same to team psychological safety, and he considered team atmosphere allowed members to believe that they would not be threatened when proposing new ideas or challenging the views of others [24]. Bare thought that team psychological safety was that members would not be punished because of talking about openly at work, or a psychological state to accept risk when presenting opinions or solutions to problems [25]. Tynan proposed self-psychological safety and psychological safety of others, which the former referred to the degree of safety felt by oneself when it came to a certain person, while the latter referred to psychological safety perception of the individual to others [26]. Drawing from the definition of Edmondson, this study argues team psychological safety as a common belief that it is safe to undertake interpersonal risk on the team.

2.6 Team learning

Academics studied and defined team learning from three perspectives: cognitive, behavioral, and knowing [27]. Cognitive perspective thought team learning was activities between members to get, share and integrate knowledge. Behavioral perspective argued that team learning was coordinate actions of team members with each other [28]. Knowing perspective considered team learning was a process that team members effect and be changed in perception and behavior. Edmondson defined team learning from behavioral perspective as a continuous process of reflection and action, which mean team learning behaviors was specific learning behavior characteristics of team members in an interactive process based on knowledge and information exchange, including asking questions, seeking feedback, testing, response to results and the discussion to error or unexpected results. Van den Bossche et al. considered that team learning behaviors was a social process of establishing a mutual shared recognition, and they distinguished clearly between three team learning behaviors:

construction, co-construction and constructive conflict [1]. Scholars made a lot of studies about the factors and the influence of team learning. Among researches of the factors affecting team learning, Ellis et al. proposed that the cognitive level, pleasant personality and openness of team members were positively correlated with team learning [29]. Mo Shenjiang et al. argued that charismatic leader would contribute to team learning [30]. Shi Liping et al. thought that team reflexivity could improve team learning capacity [31]. Gibson et al. considered that team learning would be significantly improved when team performance management was managed by an external team [32]. Learning from the definition of Edmondson about team learning, this study argues that team learning refers to specific learning behavioral characteristics team members showed in the interactive process based on knowledge and information exchange, and divides team learning into two dimensions: behaviors and reflections.

2.7 Team performance

Team performance is an important indicator to assess whether the team is efficient. Due to the different natures and objectives of teams, scholars had different definitions on team performance. Team performance in a broad sense is also known as team efficacy or team effectiveness. Hackman found that team performance was the actual result of the team to achieve the objective set, including team production, the influence of team on its members and the improvement of team work ability of future [33]. Nalder thought that team performance consisted of three areas: the case of the team's ability to complete the stated objectives, the satisfaction of members and the ability of members to continue collaboration [34]. Xu Fang considered that team performance included the work results of the whole team, the work results of individual and the promotion of team work ability of future [35]. Team performance in a narrow sense is the degree of the team completing goals or characters. Devine et al. considered that team performance was the degree of the team completing goals or characters [36]. Team performance is a result of many factors, so scholars explored factors influencing team performance from different perspectives. Magjuka et al. found in the empirical study that the greater heterogeneity of the team members, the higher team performance [37]. Zhang Yan et al. proposed that the gender diversity of the team members would help improve team performance [38]. Mullen et al. found that there was a significant positive correlation between team cohesion and team performance, which task cohesion played a major role [14]. Edmondson believed that there was a significant positive correlation between team group potency and team performance [23]. Wu Zhiming et al. thought that there was a positive relationship of transformational leadership to team performance [39]. In addition, many scholars have found that team learning has a positive effect on team performance [1, 11, 38, 40].

This study uses the definition of team performance in the broad sense, namely that team performance includes team production, the influence of team on its members and the improvement of team work ability of future.

3. Theory and hypotheses

3.1 Belief and team learning

Belief refers to the common belief of team members about the characteristics and quality of their relationship. In the relationship between belief and team learning, scholars thought that belief had an important effect on team learning. This study divides belief into five dimensions: interdependence, task cohesion, social cohesion, group potency and psychological safety, analyzes respectively their influence on team learning, and builds some relevant hypotheses.

Interdependence refers to the degree of team members rely on other members to complete the task or goal, and is divided into task interdependence and goal interdependence. It has shown that in a team which has a high degree of interdependence and its members all depend on and trust each other will result in a good communication and information sharing among members. As a result, its ability to teamwork will be improved greatly. Van den Bossche found that task interdependence could predict team learning in student team [1]. Deutsch found that under the

environment with positive goal interdependence team members could treat the views and wishes of other members with a more broad-minded, more concerned about other people's goals, and also tend to look for solutions and compromise, so that work environment promoted team learning among members, and they were more willing to propose issues, seek feedback and discuss issues [41]. This study argues that the higher interdependence of team, the more trust among team members. Based on mutual trust, team members will exchange and share information, ask questions and see feedback, which will promote team learning. Therefore, this study proposes the following hypotheses:

H1a: Interdependence has a positive effect on behaviors in team learning

H1b: Interdependence has a positive effect on reflections in team learning

Cohesion refers to the results of all the forces that make team members stay on the team, including task cohesion and social cohesion, the task cohesion refers to team members focus on a team because of common tasks, the social cohesion refers to team members focus on a team because of the emotional relationship with others. Van den Bossche et al. and Anne thought that task cohesion and team learning behaviors were positively correlated, and social cohesion and team learning behaviors were not correlated [1, 42]. This study argues that task cohesion could make team members focus on the task, and they trust and cooperate with each other to complete tasks. Social cohesion could make members emotional harmony, and create a positive work environment for the team. Both two kinds of cohesion can promote team learning. Therefore, this study proposes the following hypotheses:

H2a: Task cohesion has a positive effect on behaviors in team learning

H2b: Task cohesion has a positive effect on reflections in team learning

H3a: Social cohesion has a positive effect on behaviors in team learning

H3b: Social cohesion has a positive effect on reflections in team learning

Group potency refers to the common belief of team members on team effectiveness, and it is a perception and evaluation of team members on the team ability. Edmondson considered that team group potency was significant positive correlated with team learning behaviors and team performance [23]. Van den Bossche et al., Ortega et al. and Anne et al. found there was a positive correlation between group potency and team learning behaviors [1, 3, 42]. This study argues that group potency is an affirmation of team members to team ability. With the group potency of the team, the team members will have full of enthusiasm to complete tasks, and frequently exchange information and knowledge, which will increase team learning. Therefore, this study proposes the following hypotheses:

H4a: Group potency has a positive effect on behaviors in team learning

H4b: Group potency has a positive effect on reflections in team learning

Psychological safety refers to the common belief of team members that it is safe to undertake interpersonal risk on the team, and they believe that team will not embarrass, refuse or punish someone who braves to express his views, and this confidence comes from mutual respect and trust among team members. Kayes et al. found that when psychological safety was low, effective team communication would decrease and conflict would increase, which did not contribute to team learning [43]. Researches of western scholars also confirmed that psychological safety was significant positive correlated with team learning behaviors [1, 3, 42]. Tang Yi found that psychological safety had a positive effect on organizational citizenship behaviors and team innovation [44]. Chen Guoquan et al. thought that team psychological safety had a positive effect on team learning ability and team performance [45]. This study argues that psychological safety creates a safe work environment for team members, which make them express views, ask questions and seek feedback, exchange and share information freely, at the same time, they could discuss and correct their problems and mistakes, which will promote team learning. Therefore, this study proposes the following hypotheses:

H5a: Psychological safety has a positive effect on behaviors in team learning

H5b: Psychological safety has a positive effect on reflections in team learning

3.2 Team learning and team performance

Team learning refers to a dynamic process that team members take actions, give or receive feedback and improve or change behaviors. Team learning in behavioral perspective is a continued process of reflection and action, that team learning refers to specific learning behavioral characteristics which team members show in the interactive process based on knowledge and information exchange, including asking questions, seeking feedback, testing, response to the results, as well as the discussion of errors or unexpected results. Edmondson, Van den Bossche et al. thought that team learning behaviors could lead both sides to share knowledge and improve team performance [1, 23]. The research of Vegt et al. has showed that team learning plays a mediating role in expert diversity influences team performance [12]. Bai Minggen et al. proposed that team learning affected team performance through the moderate effect of team communication and team conflicts [40]. This study argues that the ongoing of behaviors and reflections in team learning creates a smooth flow of knowledge and information exchange. During the execution of a task, team members carry out continuous feedback and adjustment actively on the task and work, which will significantly increase team performance. Therefore, this paper proposes the following hypotheses:

H6a: Behaviors has a positive effect on team performance

H6b: Reflections has a positive effect on team performance

3.3 Mediating effect of team learning

In the literatures about interdependence, some scholars integrated task interdependence and goal interdependence, and investigated the effect of overall interdependence on team. Wageman and Stewart et al. found that interdependence had a u-shaped relationship with team performance [9, 46]. However, some scholars believed that interdependence had an inverted u-shaped relationship with team performance. Mullen et al. considered that there was a significant positive correlation between team cohesion and team performance, which task cohesion played a major role [14]. Shi Guanfeng et al. thought that both task cohesion and social cohesion positively affected team performance [18]. Durham et al. through a structural equation model found that group potency was not direct correlated with team performance, but the difficulty of the team target setting indirect influenced team performance [47]. Chen Guoquan et al. considered that psychological safety affected team performance through the mediating role of team learning ability [45]. It can be seen, there is a certain relationship between belief and team performance. This study learns from some related literatures and analysis, regards team learning as a mediate variable, and proposes that belief could affect team performance by the mediating role of team learning. Therefore, this study proposes the following hypotheses:

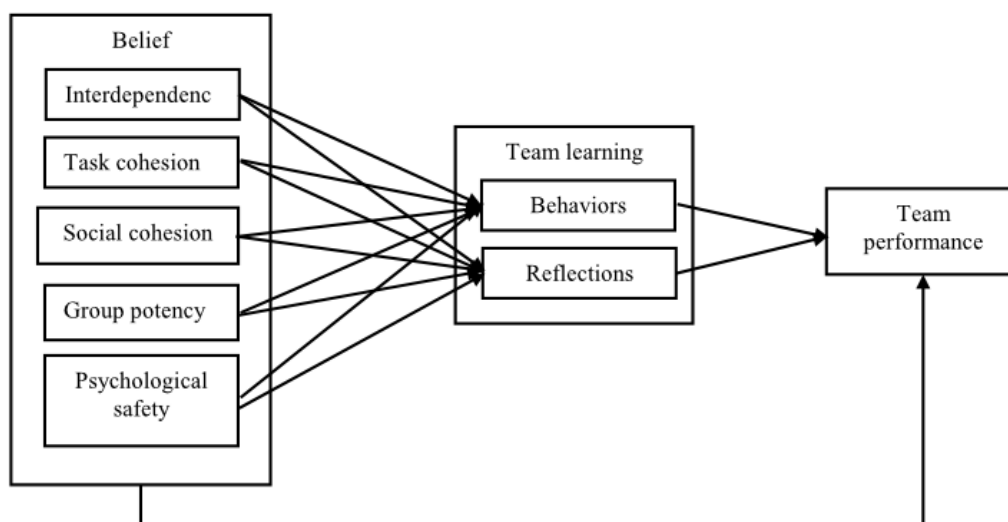


Fig. 1 The Conceptual Model

H7a: Behaviors plays a mediating role in belief affect team performance

H7b: Reflections plays a mediating role in belief affect team performance

Based on above hypotheses, this study builds a conceptual model, as shown in Figure 1.

4. Method

This study uses questionnaire to test hypotheses, the questionnaire contains two parts: the first part is the background of the subjects and teams, and the second part is the measurement scale for each variable, including belief, team learning and team performance. This paper divides belief into five dimensions which are measured by existing mature scales, such as the measurement scale of interdependence includes “you like to interact with other team members” and other two items, thus the measurement scale of belief contains 19 items. The measurement of team learning references the study of Edmondson, that the scale contains 12 items, including behaviors and reflections, which the scale of behaviors includes “we often think of some new ideas on the work” and other 6 items, and reflections includes “we often reflect on our work” and other 4 items [23]. Team performance measurement scale adopts Xiao Yuchun’s “team performance survey”, such as “we are acting according to the plan in advance” [48]. Likert’s seven grade scale is used in this study, 1 means strongly disagree and 7 means totally agree.

About 280 questionnaires were issued to the colleges and universities in Shaanxi Province, and it began on March 10, 2014, ended on July 10, 2014, and 263 questionnaires were recovered, after effective screening, 248 questionnaires were obtained, which the effective rate was 94.3%. Its background of subjects and teams is shown in Table 1 and 2.

Table 1 Personal Information Statistics

| Information Category | Basic Information | Amount | Percentage |
|----------------------|-------------------|--------|------------|
| Gender | Male | 158 | 63.70% |
| | Female | 90 | 36.30% |
| Working Status | Student | 216 | 87.10% |
| | Career Person | 32 | 12.90% |

Table 2 Team Basic Information Statistics

| Information Category | Basic Information | Amount | Percentage |
|----------------------|-------------------|--------|------------|
| Team Size | <5 | 118 | 47.58% |
| | 6-10 | 42 | 16.94% |
| | 11-15 | 14 | 5.64% |
| | >16 | 74 | 29.84% |
| Time in Team | <3 mouths | 78 | 31.50% |
| | 3-6 mouths | 38 | 15.30% |
| | 6 mouthes-1year | 66 | 26.60% |
| | 1-3 years | 30 | 12.10% |
| | >3 years | 36 | 14.50% |

5. Result

5.1 Scale reliability analysis

This study uses Likert's seven grade scale, chooses Cronbach's α as the criteria, starting from the scale level, to test the scale reliability according to the degree of consistency of its internal structure. Usually using Cronbach's α of the minimum standards for 0.7, to go on the internal consistency test. Reliability analysis of each scale is shown in Table 3.

Table 3 Scale Reliability Analysis

| Variables | Number of Items | Cronbach's α | | |
|----------------------|-----------------|---------------------|-------|-------|
| Belief | 3 | 0.782 | 0.819 | |
| Interdependence | | | | |
| Task Cohesion | 3 | 0.825 | | |
| Social Cohesion | 4 | 0.752 | | |
| Group potency | 2 | 0.746 | | |
| Psychological Safety | 7 | 0.796 | | |
| Team Learning | Behaviors | 7 | 0.900 | 0.921 |
| | Reflections | 5 | 0.882 | |
| Team Performance | 8 | | 0.901 | |

The Cronbach's α of each scale is above 0.7, and it shows the collected data has good reliability, thus overall scale is credible.

5.2 Scale validity analysis

Based on questionnaires recovered, this study makes a factor analysis of belief, team learning and team performance, which adopts KMO statistic and Bartlett's Test of Sphericity. Generally, $KMO > 0.9$ is perfect for factor analysis; $0.8 < KMO < 0.9$ is suitable; 0.7 or more is acceptable; 0.6 is poor; 0.5 or less is not suitable for factor analysis. If Bartlett's Test Sphericity at 0.05 significance level all pass, it is suitable for factor analysis. Validity analysis of each scale is shown in Table 4.

Table 4 Scale Validity Analysis

| Variables | KMO | Approx. Chi-Square | df | Sig |
|------------------|-------|--------------------|-----|-------|
| Belief | 0.843 | 947.627 | 171 | 0.000 |
| Team Learning | 0.900 | 955.474 | 66 | 0.000 |
| Team Performance | 0.899 | 540.900 | 28 | 0.000 |

As the data shown in Table 4, KMO statistics are all above 0.8 and pass significance test, so it is suitable for factor analysis. After factor analysis, this study finds that the scale of belief can draw five common factors: interdependence, task cohesion, social cohesion, group potency and psychological safety, and the accumulated variance is 62.906%. The scale of team learning can draw two common factors: behaviors and reflections, and the accumulated variance is 66.788%. The scale of team performance cannot draw common factor.

5.3 Correlation analysis

Using Pearson correlation coefficient, this study describes the linear correlation between each variable. The correlation coefficient of variables (dimensions) is shown in Table 5.

5.4 Regression analysis

With simple linear regression, this paper uses Stepwise method to make independent variables one by one into the regression equation. The F into the regression equation is 0.05, and the F removed from

the regression equation is 0.10. The regression analysis of belief and team learning is shown in Table 6. From the regression coefficients and significance coefficients, hypotheses 1a, 1b, 2a, 2b, 3a, 3b, 4a, 4b, 5a, 5b could be tested, namely the each dimension of belief are positively correlated with team learning. The regression analysis of team learning and team performance is shown in Table 7. From the regression coefficients and significance coefficients, hypotheses 6a, 6b could be tested, namely each dimension of team learning is positively correlated with team performance.

Table 5 Correlation coefficient

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|------------------------|------------|------------|------------|------------|------------|------------|------------|---|
| 1 Interdependence | 1 | | | | | | | |
| 2 Task Cohesion | .371 ** | 1 | | | | | | |
| 3 Social Cohesion | .637 ** | .308 ** | 1 | | | | | |
| 4 Group Potency | .492 ** | .476 ** | .662 ** | 1 | | | | |
| 5 Psychological Safety | .396 ** | .315 ** | .545 ** | .570 ** | 1 | | | |
| 6 Behaviors | .613 ** | .518 ** | .674 ** | .704 ** | .631 ** | 1 | | |
| 7 Reflections | .409 ** | .378 ** | .458 ** | .524 ** | .468 ** | .646 ** | 1 | |
| 8 Team Performance | .539 ** | .487 ** | .632 ** | .746 ** | .592 ** | .728 ** | .737 ** | 1 |

**p < .01.

As the data shown in Table 5, the dimensions of belief and the dimensions of team learning and team performance are significant pairwise correlated.

Table 6 Regression Analysis of Belief and Team Learning

| Model | Unstandardized Coefficients | Standardized Coefficients | t | Sig | |
|----------------------|-----------------------------|---------------------------|------|--------|-------|
| | B | SE | β | | |
| C | 1.200 | .319 | | 3.757 | 0.000 |
| Interdependence | .718 | .084 | .613 | 8.568 | 0.000 |
| C | 1.654 | .341 | | 4.853 | 0.000 |
| Task Cohesion | .640 | .096 | .518 | 6.680 | 0.000 |
| C | 1.223 | .270 | | 4.526 | 0.000 |
| Behaviors | .626 | .062 | .674 | 10.067 | 0.000 |
| C | .970 | .235 | | 4.126 | 0.000 |
| Group Potency | .723 | .058 | .746 | 12.374 | 0.000 |
| C | .603 | .370 | | 1.627 | 0.106 |
| Psychological Safety | .950 | .106 | .631 | 8.983 | 0.000 |
| C | 1.650 | .415 | | 3.979 | 0.000 |

| | | | | | | |
|-------------|----------------------|-------|------|------|--------|-------|
| | Interdependence | .539 | .109 | .409 | 4.954 | 0.000 |
| | C | 1.833 | .415 | | 4.422 | 0.000 |
| | Task Cohesion | .525 | .117 | .378 | 4.508 | 0.000 |
| | C | 1.631 | .365 | | 4.461 | 0.000 |
| Reflections | Social Cohesion | .479 | .084 | .458 | 5.691 | 0.000 |
| | C | .944 | .250 | | 3.73 | 0.000 |
| | Group Potency | .738 | .063 | .728 | 11.735 | 0.000 |
| | C | .926 | .474 | | 1.951 | 0.053 |
| | Psychological Safety | .793 | .135 | .468 | 5.855 | 0.000 |

Table 7 Regression Analysis of Team Learning and Team Performance

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig |
|------------------|-------------|-----------------------------|------|---------------------------|--------|-------|
| | | B | SE | β | | |
| Team Performance | C | .944 | .250 | | 3.783 | 0.000 |
| | Behaviors | .738 | .063 | .728 | 11.735 | 0.000 |
| Team Performance | C | 1.380 | .208 | | 6.630 | 0.000 |
| | Reflections | .664 | .055 | .737 | 12.037 | 0.000 |

5.5 Mediating effect analysis

Baron et al. noted that the mediating role needed to meet three conditions: (1) To be tested mediating variable should significantly predict the dependent variable; (2) Independent variable should predict that mediating variable; (3) When mediating variable and independent variable entered the regression equation at the same time, if regression coefficient of the independent variable decreased significantly, indicating there was a certain mediating effect; if regression coefficient changed from significant to no significant, indicating there was a full mediating effect [49]. This study analyzes mediation of team learning and the results are shown in Table 8. From the data in Table 8, after behaviors enters the regression model as a mediator, all regression coefficients of belief decrease significantly, thus it proves that behaviors is a partial mediator between belief and team performance, that test hypotheses 7a, where significance coefficient of interdependence changes from significant to no significant, thus behaviors is a full mediator between interdependence and team performance. After reflections enter the regression model as a mediator, all regression coefficients of belief decrease significantly, thus it proves that reflections are a partial mediator between belief and team performance, that test hypothesis 7b.

Table 8 Mediating Effect Analysis

| Belief | Model 1 | | | Model 2 | | | Model 3 | | |
|----------------------|---------|--------|------|---------|-------|------|---------|-------|------|
| | β | t | Sig | β | T | Sig | β | T | Sig |
| Interdependence | .539 | 7.062 | .000 | .148 | 1.904 | .059 | .285 | 4.581 | .000 |
| Task Cohesion | .632 | 8.999 | .000 | .258 | 3.190 | .002 | .372 | 6.173 | .000 |
| Social Cohesion | .487 | 6.153 | .000 | .150 | 2.097 | .038 | .243 | 3.880 | .000 |
| Group Potency | .592 | 8.120 | .000 | .221 | 2.839 | .005 | .317 | 5.001 | .000 |
| Psychological Safety | .746 | 12.374 | .000 | .462 | 5.979 | .000 | .496 | 8.810 | .000 |

6. Conclusions and significance

6.1 Conclusions

Through questionnaires empirical research method, using correlation analysis, regression analysis and mediating effect analysis, this study verifies a number of hypotheses about belief, team learning and team performance, and the empirical conclusions obtained as follows:

First, this study discusses belief in the Chinese context, and defines belief as a common belief of team members about the relationship between them. According to Van den Bossche, belief includes interdependence, task cohesion, social cohesion, group potency and psychological safety [1]. Belief will make team members respect, trust and depend on each other, and unite on the team, willing to exchange and share information, create a trusted environment for members, thus contributing to team learning. This study divides belief into five dimensions, and explores the relationship of every dimension to team learning. Empirical study indicates that interdependence, task cohesion, group potency and psychological safety positively correlate with team learning. Differing from the view of Van den Bossche et al. and Anne et al. that social cohesion does not correlate with team learning, this study finds that social cohesion positively correlate with team learning, which social cohesion refers to the degree of team members focus on team because of the emotion with others, and it also has a positive impact on team learning [1, 42].

Second, team learning can improve team performance. According to Edmondson, team learning can be divided into behaviors and reflections [23]. This study shows that team learning can improve team performance, on the one hand team learning could promote members to share information, on the other hand team learning could promote members to correct their errors in time, thus the circular interaction of behaviors and reflections can greatly improve team performance. The empirical results are same to conclusions of other scholars who studied team learning and team performance from different perspectives, namely that team learning could positively influence team performance.

Third, team learning plays a mediator between belief and team performance. This study shows that belief can affect team learning, thereby affecting team performance. In this study, team learning is divided into behaviors and reflections, which respectively enter the regression model of belief and team performance. As the data indicated, behaviors is a partial mediator between task cohesion, social cohesion, group potency, psychological safety and team performance, while a full mediator between interdependence and team performance, so that it is concluded that behaviors plays a partial mediating role between belief and team performance, and so does reflections. In conclusion, team learning partially mediates the relationship of belief to team performance.

6.2 Management implications

First, the role of belief on the team should be given attention, and scholars have studied belief meticulously. Summarize all aspects of research, interdependence has a positive effect on team process, while it also affect team learning and team performance; cohesion can have a positive impact on individual behaviors and team behaviors; group potency can not only play a key role in the innovation behaviors of team members, but also have a direct and indirect influence on team learning and team performance; psychological safety is an important factor that influence team learning and team innovation.

Managers should reasonably use the effect of belief on team, train team members' belief, and give attention to build interdependence, cohesion, group potency and psychological safety. In order to enhance team interdependence, managers should build enterprise culture or other ways to enhance the sense of belonging of members to the team. Managers should pay attention to the reasonableness of team size, which will be able to produce cohesion, while managers could build a communication platform for members to strengthen the emotional communication among members which will improve social cohesion, and establish common goals of the team which will improve task cohesion. The establishment of group potency, on the one hand comes from the team members' self-efficacy, on the other hand comes from the effective management of the team, so choosing members with high

self-efficacy when building a team, that means to scientific select members with different characteristics and reasonably arrange their works and tasks. Meanwhile in the management process, managers should develop trust and cooperation among members, instilling the successful experience of the team to enhance members' confidence on the team which will enhance group potency. To establish psychological safety, managers should focus on life and emotional needs of members, on the one hand, to encourage and support members to express their views and opinions, on the other hand, managers should organize an effective activity to develop and strengthen trust among members, to create a trusting and harmonious atmosphere within the team.

In addition, this paper demonstrates that belief affects team performance through the mediating effect of behaviors and reflections in team learning. Therefore, managers could develop interdependence, task cohesion, social cohesion, group potency and psychological safety, which will create a positive work environment that team members share information, communicate with others and reflect their work in order to improve team performance.

6.3 Limitations and prospects

The number of samples in this paper is representative in the statistical sense, but because of the limited research conditions, sample distribution limits to the same area, which may have some impact on the results. Future study may be considered a broad geographical distribution and great category of samples to analyze more meticulously. Secondly, because of lacking the scale of belief, this paper integrates scales of every dimension of belief, but the scale still should be tested by practical application and improved. This study reveals the relationship between team belief and team learning. It is believed that the future studies should continue to thoroughly explore belief in its meaning, formation mechanism and different acting paths to more accurately grasp the performance and action rule of belief in team, so as to provide a new perspective to improve team performance, and draw more targeted, more practical significance conclusions.

Acknowledgements

The research was supported by grants from the Natural Science Foundation of China awarded to the forth author. Project numbers is 71472144.

The research was supported by Xi'an Soft Science Item. Project numbers is SF1408-4.

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